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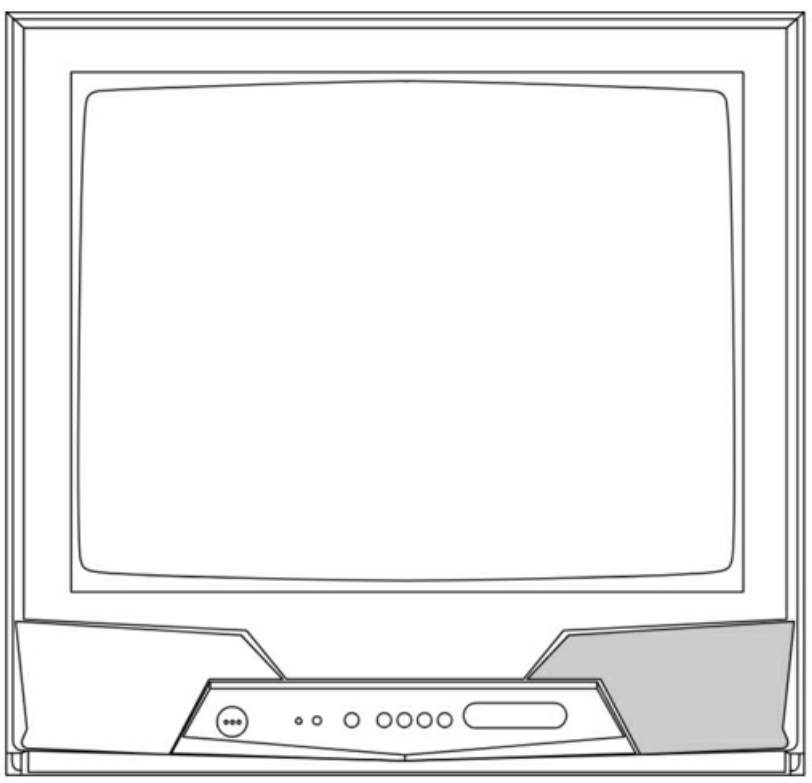
# SHARP 20GT-15 SERVICE MANUAL



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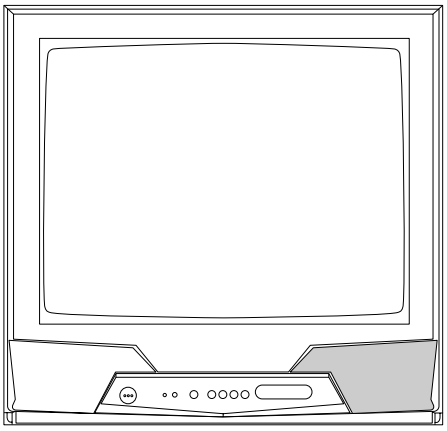
# SHARP SERVICE MANUAL

S30X520GT-15/

## COLOUR TELEVISION

***Chassis No. UA-1***



## MODEL 20GT-15

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified be used.



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### WARNING

**The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis. To prevent electric shock, do not remove cover. No user – serviceable parts inside. Refer servicing to qualified service personnel.**

SHARP CORPORATION

# FEATURES

- Favourite Channel
- Full Auto Channel Preset and Auto Channel Skip
- 100-CH Program Memory
- CATV (Hyper Band) Ready 〈Used Frequency Synthesizer Tuner〉
- AVL (Sound Keeper) Function
- Black Stretch Circuit
- On Timer/Sleep Timer/Reminder Timer
- Blue Back Noise Mute
- Rear AV - In/Out Terminals
- Colour-Comb Filter (NTSC Only)
- High Contrast Picture
- Hotel Mode
- English/Thai OSD



# SPECIFICATIONS

Convergence ..... Self Converging System
Focus ..... Quadra-Potential Electrostatic

Sweep Deflection ..... Magnetic
Intermediate Frequencies
  Picture IF Carrier ..... 38.9 MHz
  Sound IF Carrier Frequency
    5.74 MHz ..... 33.16 MHz
    5.50 MHz ..... 33.40 MHz
  Colour Sub-Carrier Frequency ..... 34.47 MHz

Power Input ..... 110 - 240V AC 50/60 Hz
Power Consumption ..... 75 W

Audio Power Output Rating ..... 3.0 W (at Max.)

Speaker
  Size ..... 5 × 9 cm (1 pc)
  Voice Coil Impedance ..... 16 ohms at 400 Hz

Aerial Input Impedance
  VHF/UHF ..... 75 ohm Unbalanced
Receiving System ..... CCIR/PAL B, G

Tuner Ranges
- VHF-Channels ..... E2 (48.25 MHz) thru E12 (224.25 MHz)
- UHF-Channels ..... E21 (471.25 MHz) thru E69 (855.25 MHz)

Dimensions ..... Width: 506.0 mm
Height: 476.0 mm
Depth: 479.0 mm
Weight (approx.): 17.2 kg

Cabinet Material ..... All Plastics

***Specifications are subject to change without prior notice.***

# FEATURES

- Favourite Channel
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***Specifications are subject to change without prior notice.***

## IMPORTANT SERVICE NOTES

**Maintenance and repair of this receiver should be done by qualified service personnel only.**

### SERVICE OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

**When servicing the high voltage system, remove static charge from it by Connecting a 10K ohm Resistor in series with an insulated wire (such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord should be disconnected from AC outlet.)**

1. **Picture tube in this receiver employs integral implosion protection.**
2. **Replace with tube of the same type number for continued safety.**
3. **Do not lift picture tube by the neck.**
4. **Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.**

### X-RAY

**This receiver is designed so that any X-Ray radiation is kept to an absolute Minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed:**

1. **When repairing the circuit, be sure not to increase the high voltage to more than 28.7kV (at beam 0 μA) for the set.**
2. **To keep the set in a normal operation , be sure to make it function on 24.5kV ± 1.5kV (at beam 1100 μA) in the case of the set. The set has been factory - Adjusted to the above-mentioned high voltage.**

∴ **If there is a possibility that the high voltage fluctuates as a result of the repairs, never forget to check for such high voltage after the work.**

3. **Do not substitute a picture tube with unauthorized types and/or brands which may cause excess X-ray radiation.**

### BEFORE RETURNING THE RECEIVER

**Before returning the receiver to the user, perform the following safety checks.**

1. **Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.**
2. **Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators etc.**

## ADJUSTMENT PRECAUTION

This model's setting are adjusted in two different ways: through the I2C bus control and in the conventional analog manner. The adjustments via the I2C bus control include preset-only items and variable data.

**1. Setting the service mode by the microprocessor.**

(1). Short JA 122 & JA 124 for 1 second and release to switch to the service mode position, and the microprocessor is in input mode. (Adjustment through the I2C bus control). (Use JWS Key to set as well).
(2). Press the CH DOWN / UP key on the remote controller to get ready to select the mode one by one.
(3). Press the CH DOWN / UP key on the remote controller to select the modes reversibly one by one.
(4). Using the VOLUME UP/ DOWN key on the remote controller, the data can be modified.
(5). Short JA 122 & JA 124 for 1 second and release to switch to the normal mode (OFF) position, and the microprocessor is in out of the service mode.

**2. Factory Presetting.**

(1). Short JA 122 & JA 124 for 1 second and release to switch to the service mode position and turn on the main power switch. Initial values are automatically preset, only when a new EEPROM is used (Judge with the first 4 bytes).
(2). The initial data are preset as listed in page 4, 5, & 6.
(3). Make sure the data need modify or not (Initial data).

Note: Once the chassis has been assembly together and ready to be POWER ON for the FIRST TIME, make sure to short JA 122 & JA 124 to switch to the service mode position first and then turn on the main power switch (See 2-(1) above).

Precaution: If haven't done this initiation, it may possibly generate excessive Beam current.

**3. For reference please check with memory map (UA1 Series type RH-IX3368CEN0 Attachment)**

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Precaution: If haven't done this initiation, it may possibly generate excessive Beam current.

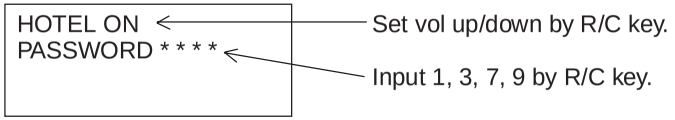
**3. For reference please check with memory map (UA1 Series type RH-IX3368CEN0 Attachment)**

# UA1 HOTEL MODE APPLICATION

How to enable/disable the “Hotel Mode” ?

Ans: a) Press the R/C (FUNCTION) key until language selection appear, within five second press the (one/two digit) key and keep pressing it for five second, then you can see the hotel mode with four digits password.

b) Key in the four digits password starting with number “1”, “3”, “7”, “9”, then the hotel mode will be enable, you can switch on/off the hotel mode by using R/C (volume up/down) key.




#1 Ch 1 is your selected channel for hotel mode.

* We recommend
Before set the hotel mode, it is better to choose ch 1 & set s-vol level up to 75% full scale. After set hotel mode, starting channel will be always ch 1 & maximum sound level out will be set the half of full scale.

* If you set hotel mode in AV, starting channel will be the last ch which you received before power off (same as normal operation)

**CONDITION:**

When using hotel mode, user can control “contrast”, “brightness”, “sharpness” and “tint” function.
But after power off, it will return to the initial setting.
You can’t use: --

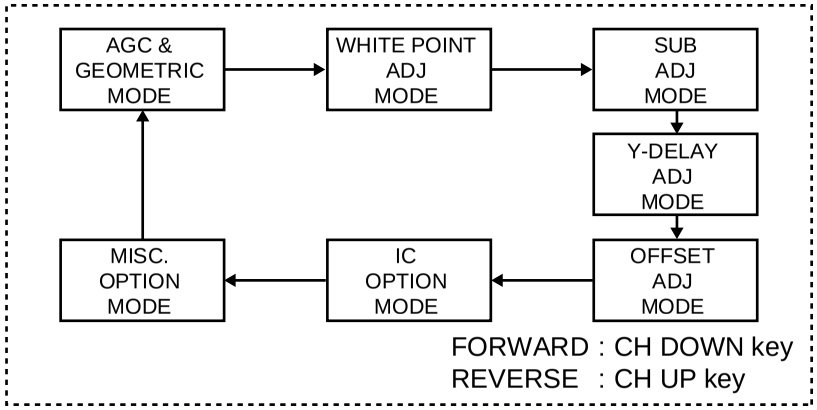
Preset mode
Fine tuning
Skip mode
System selection

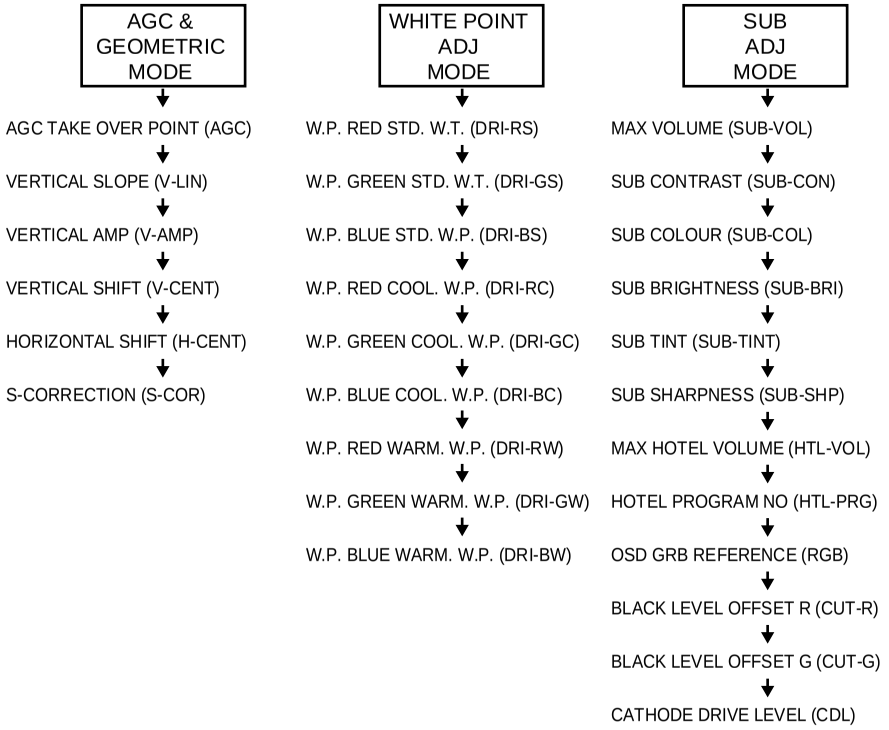
The others function is allowed to be used.



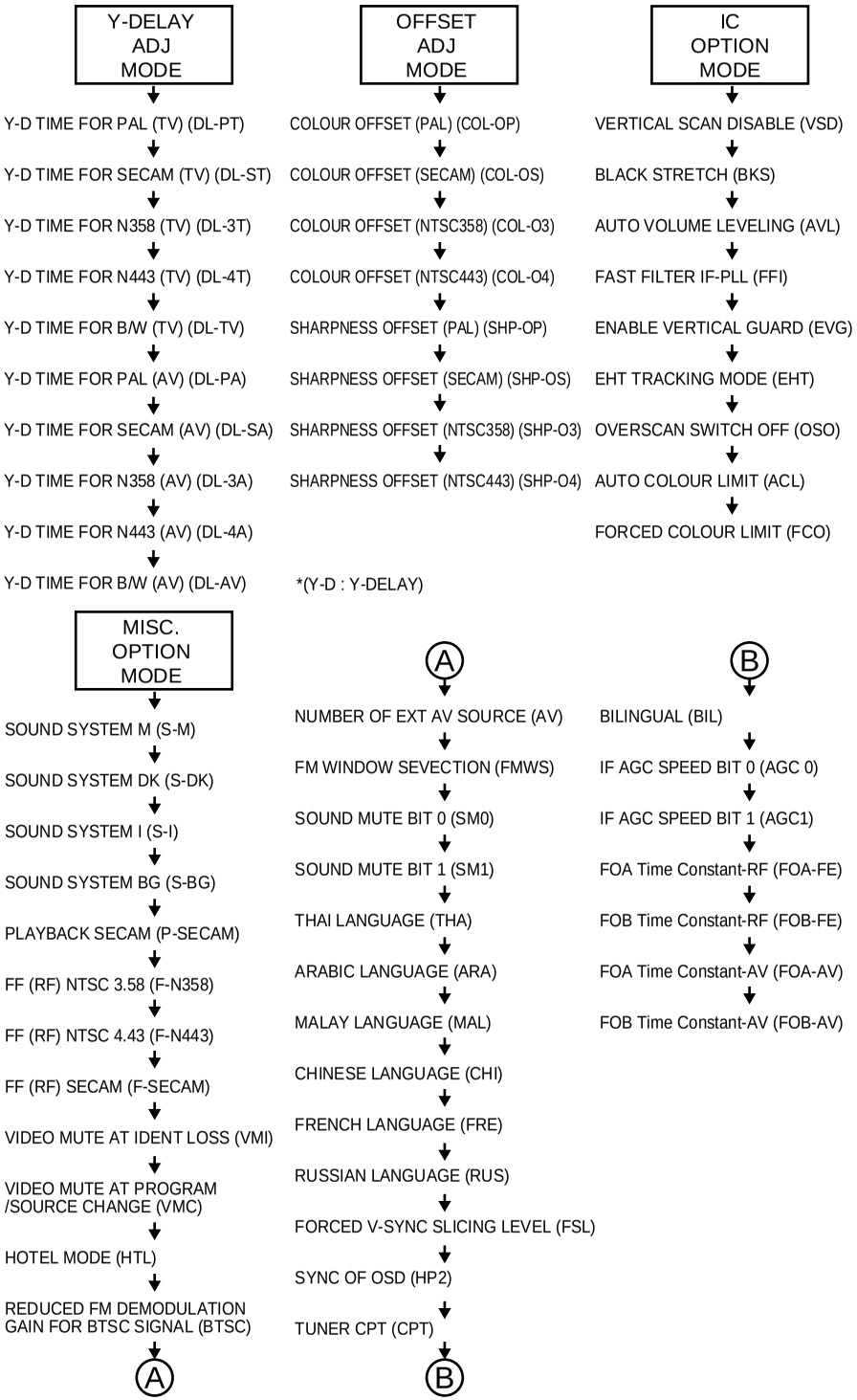
# SERVICE MODE

1) In the Service Mode, Key is used to select the mode in the following order.





AGC & GEOMETRIC MODE
AGC TAKE OVER POINT (AGC)
VERTICAL SLOPE (V-LIN)
VERTICAL AMP (V-AMP)
VERTICAL SHIFT (V-CENT)
HORIZONTAL SHIFT (H-CENT)
S-CORRECTION (S-COR)
WHITE POINT ADJ MODE
W.P. RED STD. W.T. (DRI-RS)
W.P. GREEN STD. W.T. (DRI-GS)
W.P. BLUE STD. W.P. (DRI-BS)
W.P. RED COOL. W.P. (DRI-RC)
W.P. GREEN COOL. W.P. (DRI-GC)
W.P. BLUE COOL. W.P. (DRI-BC)
W.P. RED WARM. W.P. (DRI-RW)
W.P. GREEN WARM. W.P. (DRI-GW)
W.P. BLUE WARM. W.P. (DRI-BW)
SUB ADJ MODE
MAX VOLUME (SUB-VOL)
SUB CONTRAST (SUB-CON)
SUB COLOUR (SUB-COL)
SUB BRIGHTNESS (SUB-BRI)
SUB TINT (SUB-TINT)
SUB SHARPNESS (SUB-SHP)
MAX HOTEL VOLUME (HTL-VOL)
HOTEL PROGRAM NO (HTL-PRG)
OSD GRB REFERENCE (RGB)
BLACK LEVEL OFFSET R (CUT-R)
BLACK LEVEL OFFSET G (CUT-G)
CATHODE DRIVE LEVEL (CDL)

FORWARD : CH DOWN key
REVERSE : CH UP key
* ( ) means OSD display.


Y-DELAY ADJ MODE
Y-D TIME FOR PAL (TV) (DL-PT)
Y-D TIME FOR SECAM (TV) (DL-ST)
Y-D TIME FOR N358 (TV) (DL-3T)
Y-D TIME FOR N443 (TV) (DL-4T)
Y-D TIME FOR B/W (TV) (DL-TV)
Y-D TIME FOR PAL (AV) (DL-PA)
Y-D TIME FOR SECAM (AV) (DL-SA)
Y-D TIME FOR N358 (AV) (DL-3A)
Y-D TIME FOR N443 (AV) (DL-4A)
Y-D TIME FOR B/W (AV) (DL-AV)
OFFSET ADJ MODE
COLOUR OFFSET (PAL) (COL-OP)
COLOUR OFFSET (SECAM) (COL-OS)
COLOUR OFFSET (NTSC358) (COL-O3)
COLOUR OFFSET (NTSC443) (COL-O4)
SHARPNESS OFFSET (PAL) (SHP-OP)
SHARPNESS OFFSET (SECAM) (SHP-OS)
SHARPNESS OFFSET (NTSC358) (SHP-O3)
SHARPNESS OFFSET (NTSC443) (SHP-O4)
*(Y-D : Y-DELAY)
IC OPTION MODE
VERTICAL SCAN DISABLE (VSD)
BLACK STRETCH (BKS)
AUTO VOLUME LEVELING (AVL)
FAST FILTER IF-PLL (FFI)
ENABLE VERTICAL GUARD (EVG)
EHT TRACKING MODE (EHT)
OVERSCAN SWITCH OFF (OSO)
AUTO COLOUR LIMIT (ACL)
FORCED COLOUR LIMIT (FCO)
MISC. OPTION MODE
SOUND SYSTEM M (S-M)
SOUND SYSTEM DK (S-DK)
SOUND SYSTEM I (S-I)
SOUND SYSTEM BG (S-BG)
PLAYBACK SECAM (P-SECAM)
FF (RF) NTSC 3.58 (F-N358)
FF (RF) NTSC 4.43 (F-N443)
FF (RF) SECAM (F-SECAM)
VIDEO MUTE AT IDENT LOSS (VMI)
VIDEO MUTE AT PROGRAM /SOURCE CHANGE (VMC)
HOTEL MODE (HTL)
REDUCED FM DEMODULATION GAIN FOR BTSC SIGNAL (BTSC)
A
A
NUMBER OF EXT AV SOURCE (AV)
FM WINDOW SEVECTION (FMWS)
SOUND MUTE BIT 0 (SM0)
SOUND MUTE BIT 1 (SM1)
THAI LANGUAGE (THA)
ARABIC LANGUAGE (ARA)
MALAY LANGUAGE (MAL)
CHINESE LANGUAGE (CHI)
FRENCH LANGUAGE (FRE)
RUSSIAN LANGUAGE (RUS)
FORCED V-SYNC SLICING LEVEL (FSL)
SYNC OF OSD (HP2)
TUNER CPT (CPT)
B
B
BILINGUAL (BIL)
IF AGC SPEED BIT 0 (AGC 0)
IF AGC SPEED BIT 1 (AGC1)
FOA Time Constant-RF (FOA-FE)
FOB Time Constant-RF (FOB-FE)
FOA Time Constant-AV (FOA-AV)
FOB Time Constant-AV (FOB-AV)

The flow of Mode lists as following

Direct Key-in Step 1 Mode

| RC COMMAND | SERVICE-ITEM |
|---|---|
| FUNCTION | AGC |
| CONTRAST DOWN | V-LIN |
| COLOUR DOWN | V-AMP |
| BRIGHTNESS DOWN | V-CENT |
| TINT DOWN | H-CENT |
| SHARPNESS DOWN | EW// |
| SYSTEM | HB |
| BLUEBACK | S-COR |
| TIMER | SUB-VOL |
| CONTRAST UP | SUB-CON |
| COLOUR UP | SUB-COL |
| BRIGHTNESS UP | SUB-BRI |
| TINT UP TINT | SUB-TINT |
| SHARPNESS UP | SUB-SHP |
| CHANNEL 1 | DRI-GS |
| CHANNEL 4 | DRI-BS |
| CHANNEL 7 | CUT-R |
| CHANNEL FLASHBACK | CUT-G |

AFTER SHORT JA 122 & JA 124, AND TURN ON THE MAIN POWER SWITCH, READ DATA
FROM EEPROM ADDRESS 00H ~ 03H, AND COMPARE TO THE LIST BELOW, IF DIFFERENT, INITIALIZE THE EEPROM.

| ADDRESS | DATA | ADDRESS | DATA |
|---|---|---|---|
| 00H: | 55H | 02H: | 43H |
| 01H: | 4FH | 03H: | A1H |

| EEPROM ITEMS | OSD | DATA LENGTH | INITIAL DATA | FIX/ADJ | REMARK |
|---|---|---|---|---|---|
| AGC TAKE OVER POINT | AGC | 0~63 | 14 | ADJ | |
| VERTICAL SLOPE | V-LIN | 0~63 | 32 | ADJ | |
| VERTICAL AMPLITUDE | V-AMP | 0~63 | 32 | ADJ | |
| VERTICAL SHIFT | V-CENT | 0~63 | 32 | ADJ | |
| HORIZONTAL SHIFT | H-CENT | 0~63 | 32 | ADJ | |
| S-CORRECTION | S-COR | 0~63 | 0 | FIX | |
| WHITE POINT RED STD WHITE TEMP | DRI-RS | 0~63 | 32 | FIX | |
| WHITE POINT GREEN STD WHITE TEMP | DRI-GS | 0~63 | 32 | ADJ | |
| WHITE POINT BLUE STD WHITE TEMP | DRI-BS | 0~63 | 32 | ADJ | |
| WHITE POINT RED WARM WHITE TEMP | DRI-RW | 0~63 | 32 | FIX | |
| WHITE POINT GREEN WARM WHITE TEMP | DRI-GW | 0~63 | 32 | FIX | (DRI-GS)-7 DATA |
| WHITE POINT BLUE WARM WHITE TEMP | DRI-BW | 0~63 | 32 | FIX | (DRI-BS)-7 DATA |
| WHITE POINT RED COOL WHITE TEMP | DRI-RC | 0~63 | 25 | FIX | (DRI-BS)-7 DATA |
| WHITE POINT GREEN COOL WHITE TEMP | DRI-GC | 0~63 | 32 | FIX | (DRI-GS)-7 DATA |
| WHITE POINT BLUE COOL WHITE TEMP | DRI-BC | 0~63 | 32 | FIX | (DRI-BS) SAME DATA |
| MAX VOLUME | SUB-VOL | 0~63 | 63 | FIX | |
| SUB CONTRAST | SUB-CON | 0~63 | 63 | FIX | |
| SUB COLOUR | SUB-COL | 0~63 | 32 | ADJ | |
| SUB BRIGHTNESS | SUB-BRI | 0~63 | 32 | ADJ | |
| SUB TINT | SUB-TINT | 0~63 | 32 | ADJ | |
| SUB SHARPNESS | SUB-SHP | 0~63 | 32 | FIX | |
| MAX HOTEL VOLUME | HTL-VOL | 0~63 | 32 | FIX | *1 |
| HOTEL PROGRAM NUMBER | HTL-PRG | 0~99 OR>99FOR NONE | 255 | FIX | |
| OSD GRB REFERENCE | RGB | 0~15 | 15 | FIX | |
| BLACK LEVEL OFF-SET R | CUT-R | 0~15 | 8 | FIX | |
| BLACK LEVEL OFF-SET B | CUT-G | 0~15 | 8 | FIX | |
| CATHODE DRIVE LEVEL | CDL | 0~15 | 0 | FIX | *2 |
| Y-DELAY TIME FOR PAL(TV) [YD] | DL-PT | 0~15 | 12 | FIX | |
| Y-DELAY TIME FOR SECAM(TV) [YD] | DL-ST | 0~15 | 15 | FIX | |
| Y-DELAY TIME FOR N358 (TV) [YD] | DL-3T | 0~15 | 12 | FIX | |
| Y-DELAY TIME FOR N443 (TV) [YD] | DL-4T | 0~15 | 12 | FIX | |
| Y-DELAY TIME FOR B/W (TV) [YD] | DL-TV | 0~15 | 12 | FIX | |
| Y-DELAY TIME FOR PAL (AV) [YD] | DL-PA | 0~15 | 12 | FIX | |
| Y-DELAY TIME FOR SECAM (AV) [YD] | DL-SA | 0~15 | 15 | FIX | |
| Y-DELAY TIME FOR N358 (AV) [YD] | DL-3A | 0~15 | 12 | FIX | |
| Y-DELAY TIME FOR N443 (AV) [YD] | DL-4A | 0~15 | 12 | FIX | |
| Y-DELAY TIME FOR B/W (AV) [YD] | DL-AV | 0~15 | 12 | FIX | |
| COLOUR OFFSET (PAL) | COL-OP | 0~15 | 8 | FIX | |
| COLOUR OFFSET (SECAM) | COL-OS | 0~15 | 8 | FIX | |
| COLOUR OFFSET (NTSC358) | COL-O3 | 0~15 | 4 | FIX | |
| COLOUR OFFSET (NTSC443) | COL-O4 | 0~15 | 4 | FIX | |
| SHARPNESS OFFSET (PAL) | SHP-OP | 0~15 | 8 | FIX | |
| SHARPNESS OFFSET (SECAM) | SHP-OS | 0~15 | 4 | FIX | |
| SHARPNESS OFFSET (NTSC358) | SHP-O3 | 0~15 | 12 | FIX | |
| SHARPNESS OFFSET (NTSC443) | SHP-O4 | 0~15 | 8 | FIX | |

| EEPROM ITEMS | OSD | DATA LENGTH | INITIAL DATA | FIX/ADJ | REMARK |
|---|---|---|---|---|---|
| VERTICAL SCAN DISABLE | VSD | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| BLACK STRETCH | BKS | 0(DISABLE)/1(ENABLE) | 1 | FIX | |
| AUTOMATIC VOLUME LEVELING | AVL | 0(DISABLE)/1(ENABLE) | 1 | FIX | |
| FAST FILTER IF-PLL | FFI | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| ENABLE VERTICAL GUARD (RGB BLANKING) | EVG | 0(DISABLE)/1(ENABLE) | 1 | FIX | ONLY BLK |
| EHT TRACKING MODE (HCO) | EHT | 0(DISABLE)/1(ENABLE) | 1 | FIX | |
| OVERSCAN SWITCH OFF | OSO | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| AUTO COLOUR LIMIT | ACL | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| FORCED COLOUR LIMIT | FCO | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| SOUND SYSTEM M | S-M | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| SOUND SYSTEM DK | S-DK | 0(DISABLE)/1(ENABLE) | 1 | FIX | *3 |
| SOUND SYSTEM I | S-I | 0(DISABLE)/1(ENABLE) | 1 | FIX | *3 |
| SOUND SYSTEM BG | S-BG | 0(DISABLE)/1(ENABLE) | 1 | FIX | |
| PLAYBACK SECAM | P-SECAM | 0(DISABLE)/1(ENABLE) | 1 | FIX | *3 |
| FE (RF) NTSC 3.58 | F-N358 | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| FE (RF) NTSC 4.43 | F-N443 | 0(DISABLE)/1(ENABLE) | 1 | FIX | *4 |
| FE (RF) SECAM | F-SECAM | 0(DISABLE)/1(ENABLE) | 1 | FIX | *5 |
| VIDEO MUTE AT IDENT LOSS | VMI | 0(DISABLE)/1(ENABLE) | 1 | FIX | |
| VIDEO MUTE AT PROGRAM/SOURCE CHANGE | VMC | 0(DISABLE)/1(ENABLE) | 1 | FIX | |
| HOTEL MODE | HTL | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| REDUCED FM DEMODULATOR GAIN FOR BTSC SIGNAL | BTSC | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| NUMBER OF EXTERNAL AV SOURCE | AV | 0 FOR1 AV/1 FOR 2AV | 1 | ADJ | *6 |
| FM WINDOW SELECTION | FMWS | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| SOUND MUTE BIT 0 | SM0 | 0(DISABLE)/1(ENABLE) | 1 | FIX | |
| SOUND MUTE BIT 1 | SM1 | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| THAI LANGUAGE | THA | 0(DISABLE)/1(ENABLE) | 0 | FIX | *7 |
| ARABIC LANGUAGE | ARA | 0(DISABLE)/1(ENABLE) | 1 | FIX | *3 |
| MALAY LANGUAGE | MAL | 0(DISABLE)/1(ENABLE) | 1 | FIX | *3 |
| CHINESE LANGUAGE | CHI | 0(DISABLE)/1(ENABLE) | 1 | FIX | *3 |
| FRENCH LANGUAGE | FRE | 0(DISABLE)/1(ENABLE) | 1 | FIX | *3 |
| RUSSIAN LANGUAGE | RUS | 0(DISABLE)/1(ENABLE) | 1 | FIX | *3 |
| FORCED V-SYNC SLICING LEVEL | FSL | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| SYNC OF OSD | HP2 | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| TUNER CPT | CPT | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| BILINGUAL | BIL | 0(DISABLE)/1(ENABLE) | 0 | ADJ | *8 |
| IF AGC SPEED BIT 0 | AGC0 | 0(DISABLE)/1(ENABLE) | 1 | FIX | |
| IF AGC SPEED BIT 1 | AGC1 | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| PHI-1 TIME CONSTANT (RF) | FOA-FE | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| PHI-1 TIME CONSTANT (RF) | FOB-FE | 0(DISABLE)/1(ENABLE) | 0 | FIX | |
| PHI-1 TIME CONSTANT (OFF AIR) | FOA-AV | 0(DISABLE)/1(ENABLE) | 1 | FIX | |
| PHI-1 TIME CONSTANT (OFF AIR) | FOB-AV | 0(DISABLE)/1(ENABLE) | 1 | FIX | |

NOTE :
FIXED DATA, PLEASE DO NOT CHANGE WITHOUT SPECIFIC INSTRUCTION.

*1: UNLESS CUSTOMER REQUEST, OR ELSE FIX THE ADJUSTMENT.
*2: CDL DATA=2 , FOR 20" & 21" ONLY
*3: MANUAL CHANGE TO '0'
*4: MANUAL CHANGE TO '0'
*5: MANUAL CHANGE TO '0'
*6: IF 1 AV-OUT, SET TO '0'
IF 2 AV-OUT, SET '1'
*7: MANUAL CHANGE TO '1'
*8: IF BILINGUAL MODEL PLEASE CHANGE TO '1'

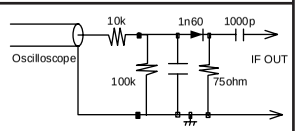
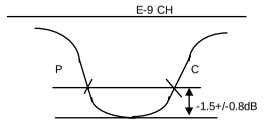
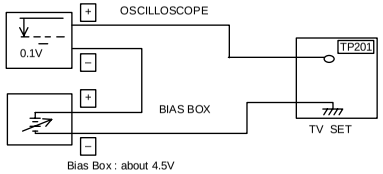
# SHIPPING SETTING & CHECKING

(1) The following default data has been factory-set for the E2PROM.

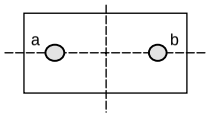
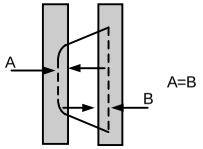
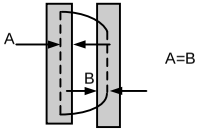
| ITEMS | DATA SETTING |
|---|---|
| LAST PROGRAM/CHANNEL | 1 |
| FLASHBACK PROGARM/CH | 1 |
| DIGIT | 1 |
| C-SYSTEM | AUTO |
| S-SYSTEM *1 | B/G |
| SKIP | OFF |
| AFC | ON |
| VOLUME | 1 |
| CONTRAST | 60 (MAX) |
| COLOUR | 0 (CENTER) |
| BRIGHTNESS | 0 (CENTER) |
| TINT | 0 (CENTER) |
| SHARPNESS | 0 (CENTER) |
| WHITE TEMP | STANDARD |
| REMINDER TIMER | In-active, ”—:—” |
| ON TIMER | In-active, ”—:—” |
| OFF TIMER | In-active, ”—:—” |
| LAST POWER | POWER-ON |
| LANGUAGE *1 | THAI |
| BLUE BACK MUTE | OFF |
| HOTEL MODE | OFF |

*1: PLEASE CHANGE IT BY REMOTE CONTROL

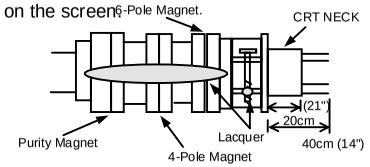
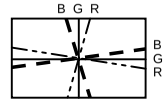
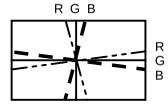
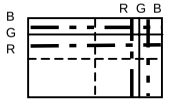
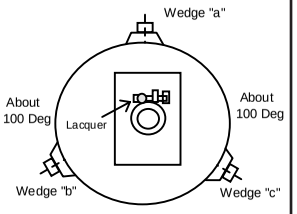
# PIF ADJUSTMENT CHECKING

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | Tuner IFT<br>( PRESET ) | (1) Get the tuner ready to receive the CH. E - 9 signal, but with no signal input. Adjust the PLL data.<br>(2) Connect the sweep generator's output cable to the tuner antenna. (RF SWEEP)<br>(3) Adjust the sweep generator's to 80dBuV.<br>(4) Connect the response lead (use LOW IMPEDANCE probe with wave detector ; see Fig.1) to the tuner's IF output terminal. (This terminal must have the probe alone connected ).<br>(5) Set the RF AGC to 0 - 6 V with no saturation with the waveform.<br>(6) Adjust the tuner IF coil to obtain the waveform as shown in Fig. 2.<br>Note : Be sure to keep the tuner cover in position during this adjustment. |  <br>**Fig. 1**<br>  <br>**Fig. 2** |
| 2 | RF-AGC<br>TAKE OVER<br>POINT<br>ADJUSTMENT<br>(I2C BUS<br>CONTROL) | (1) Receive "PAL COLOR BAR" signal. Signal Strength: 57 ± 1dBμV (75 ohm open)<br>(2) Connect the oscilloscope to TP201 (Tuner's AGC Terminal) as shown in Fig 3-1.<br>  <br>**Fig. 3-1**<br>(3) Call "AG" mode in service mode. Adjust the "AG" bus data to obtain the Tuner output pin drop 0.1V below maximum voltage.<br>(4) Change the antenna input signal to 63 ~ 67dBμV, and make sure there is no noise.<br>(5) Turn up the input signal to 90 ~ 95 dBμB to be sure that there is no cross modulation beat. | Note : For the 50 ohm signal strength gauge, when not using 50/75 impedance adapter, signal strength is 52 ± 1dBμV (75 ohm open), instead of 57 ± 1dBμV (75 ohm open).<br>Precaution : The loss of using impedance adapter. |

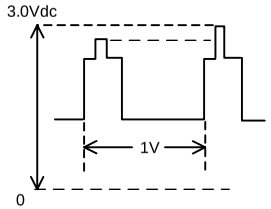
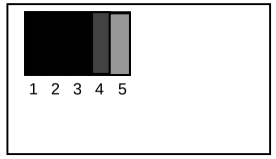
# PURITY ADJUSTMENT

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | PURITY ADJ. | (1) Receive the GREEN -ONLY signal. Adjust the beam current to ~700μA (21"&20")/ ~500μA(14").<br>(2) Maintain the purity magnet at the zero magnetic field and keep the static convergence roughly adjusted.<br>(3) Observe the points a, b, as shown in Fig. 1-1 through the microscope. Adjust the landings to A rank requirement.<br>(4) Orient the raster rotation to 0 eastward.<br>(5) Tighten up the deflection coil screws. Tightening torque : 108N ± 20N (11Kgf ± 2Kgf)<br>(6) Make sure the CRT corners landing meet the A rank requirements. If not, stick the magnet sheet to correct it.<br>Note : This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 700μA. (For 14", the beam current should be over 500μA). |  Fig. 1-1<br>  Fig. 1-2 Rank A (On the right of CRT)<br>  Fig. 1-3 Rank A (On the left of CRT) |

# CONVERGENCE ADJUSTMENT

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | CONVERGENC ADJ (To be done after the purity adjustment. | (1) Receive the "Crosshatch Pattern" signal.<br>(2) Using the remote controller, call NORMAL mode.<br>(Static convergence)<br>(1) Turn the 4 - pole magnet to a proper opening angle in order to superpose the blue and red colours.<br>(2) Turn the 6 - pole magnet to a proper opening angle in order to superpose the green colour over the blue and red colours.<br>(Dynamic convergence )<br>(1) Adjust the convergence on the fringes of the screen in the following steps.<br>a) Fig. a : Drive the wedge at point " a " and swing the deflection coil upward.<br>b) Fig. b : Drive the wedge at point " b " and " c " and swing the deflection coil downward.<br>c) Fig. c : Drive the " c " wedge deeper and swing the deflection coil rightward.<br>d) Fig. d : Drive the " b " wedge deeper and swing the deflection coil leftward.<br>(2) Fix all the wedges on the CRT and apply glass tape over them.<br>(3) Apply lacquer to the deflection yoke lock screw, magnet unit (purity, 4 - pole, 6 - pole magnets) and magnet unit lock screw. Finally received the Red - only and Blue - only signals to make sure there is no other colours on the screen.<br>  |  Fig. a<br>  Fig. b<br>  Fig. c<br> Fig. d<br>  |

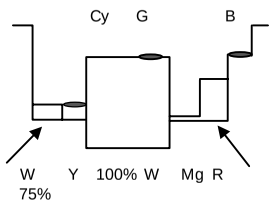
# CUT OFF, BKGD, SUB-CONT ADJUSTMENT.

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | CRT CUTOFF ADJUSTMENT (I2C BUS CONTROL) | (1) Switch TV to VIDEO mode, BLUE BACK OFF, with NO VIDEO signal.<br>(2) Press R/C to set Picture Normal condition.<br>(3) Connect the oscilloscope to Red OUT from IC801. (TP851)<br>Range : 1 V/Div (DC)<br>Sweep : 5 msec/Div<br>(3) Adjust SCREEN VR, so that the tip of signal reach 3.0 Vdc ± 0.1 Vdc. |  |
| 2 | SUB-BRIGHTNESS ADJUSMENT (I2C BUS CONTROL) | (1) Call "SUB-BRI" in service mode. (Receive Crosshatch pattern with 5 black level windows)<br>(2) Adjust the "SUB BRIGHT" bus data in order that the line 1, 2 and 3 have the same darkness wherelse line 4 is slightly brighter than line 1, 2 and 3 and finally line 5 will be the brighter than line 4. |  <br>1, 2, 3 are in same black level. |
| 3 | WHITE BALANCE SERVICE MODE ADJ (I2C BUS CONTROL) | (1) Receive the "WHITE" Pattern with BURST signal.<br>(2) Press R/C to set Picture NORMAL condition.<br>(3) Connect the DC miliammeter between the TP602 ( - ) TP 603 ( + ).<br>(4) Check Beam current should be around 1100μA. (20"/21") (14" around 800μA).<br>(5) Set it to service mode and adjust the DRI-GS, DRI-BS data to have a colour temperature of 12,300°K . * Note .<br>(6) Receive "WHITE" pattern, WITH BURST signal, and set Brightness Y by generator, to ** 10 cd/m2 (Minolta CA-100) by reducing Luminate Y signal.<br>(7) Adjust "CUT-R" & "CUT-G" to get 12,300°K. Then go back normal mode (High Bright**) to check colour temperature. If out of range, back to (1).<br>Note : This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 700μA. (For 14", the beam current should be over 500μA).<br>* ADJUST DRI-GC/GW, DRI-BC/BW AS FOLLOWING DATA AFTER FINISHING DRI-GS AND DRI-BS.<br>DRI-GC/GW DATA = "DRI-GS"-7 DATA<br>DRI-RC = 25; DRI-BC = DRI-BS;<br>DRI-RW = 32<br>DRI-BW DATA = "DRI-BS" -7 DATA | Refer to **SHIPPING SETTING & CHECKING**.<br><br># 12300°K X : 0.272<br>Y : 0.275<br><br>(MINOLTA COLOUR ANALYZER CA-100)<br>*Note: Above Data can be UP/DOWN by Volume key.<br><br>Low High<br>14" 10cd/m2 200cd/m2<br>20"/21" 10cd/m2 120cd/m2 |
| 4 | Max Beam Check | (1) Receive the "Monoscope Pattern" signal.<br>(2) Press R/C to set Picture NORMAL condition.<br>(3) Connect the DC miliammeter between TP603 ( + ) & TP 602 ( - )<br>(Full Scale: 3mA Range)<br>(4) Beam current must be within 1100 ± 100μA (21")<br>800 ± 100μA (14") | |

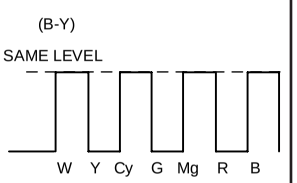
# HORIZONTAL, VERTICAL, DEFLECTION LOOP and FOCUS ADJUSTMENT

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | V-SLOPE (I2C BUS CONTROL) | (1) Receive PAL 50Hz Monoscope Pattern Signal<br>(2) Call the "V-LIN" mode.<br>(3) Increase or decrease "V-LIN" by Volume key till the horizontal line in the center of monoscope is just at the position where the blanking starts. | |
| 2 | V-SHIFT (I2C BUS CONTROL) | (1) Call the "V-CENT" mode.<br>(2) Increase or decrease "V-CENT" by Volume key till the picture is centered. | |
| 3 | V - AMP (I2C BUS CONTROL) | (1) Call the "V-AMP" mode.<br>(2) Increase or decrease "V - AMP" by Volume key to set overscan of 8.5% typical. Adjustment Spec 8.5% range +1% -0%. | |
| 4 | S-CORRECTION (I2C BUS CONTROL) | FIXED DATA, NO NEED TO ADJUST. | |
| 5 | H- SHIFT (50) (H - CENTER) (I2C BUS CONTROL) | (1) Call the "H-CENT" mode.<br>(2) Increase or decrease "H-CENT" by Volume key to center the picture horizontal. | |
| 1 | Focus | (1) Receive the "Monoscope Pattern" signal.<br>(2) Press R/C to set Picture NORMAL condition.<br>(3) Adjust the focus control to get the best focusing. | |

# PAL CHROMA ADJUSTMENT

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | SUB COLOUR (I2C BUS CONTROL) | (1) Receive the "PAL Colour Bar" signal.<br>(2) Press R/C to set Picture Normal condition.<br>(3) Connect the oscilloscope to Red cathode. (TP854)<br>Range : 20 V/Div (AC) (Using 10:1 Probe)<br>Sweep Time : 10 μsec/Div<br>(4) Using the R/C call "SUB COL" in SERVICE mode. Adjust SUB COLOUR bus data, so that the 75% White & Red portions of PAL Color Bar be at the same level shown as Fig. 1-1.<br>(5) Clear the SERVICE mode. |  <br>**Fig. 1-1** |

# NTSC CHROMA ADJUSTMENT

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | SUB-TINT (I2C BUS CONTROL) | (1) Receive the "NTSC 3.58 Color Bar" signal thru AV in.<br>(2) Connect the oscilloscope to TP853 (P882 pin5) BLUE-OUT.<br>Range : 1V/Div (AC) (Use Probe 10:1)<br>Sweep time : 10μsec/Div<br>(3) Call the "SUB-TINT" mode in service mode. Adjust the "SUB-TINT" bus data to obtain the waveform shown as Fig. 1-1.<br>(4) Clear the SERVICE mode. |  <br>**Fig. 1-1** |

# PROTECTOR OPERATION CHECKING

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | BEAM PROTECTOR | (1) Receive "Monoscope Pattern" signal.<br>(2) Set CONTRAST MAX.<br>(3) Set BRIGHT MAX.<br>(4) During the Collector & Emitter of Q883/5/7 short, make sure the protector ON and switch to standby mode. | * Select one of Q883/5/7 to do each short test. |
| 2 | H, V PROTECTOR | (1) Receive "Monoscope Pattern" signal.<br>(2) Connect output of Bias Box to D607 cathode (R606 side).<br>(3) Set voltage of Bias Box to 18V and make sure the protector is not work.<br>(4) Set voltage of Bias Box to 27V, and make sure the protector functions. | |
| 3 | OTHER PROTECTOR | (1) Once finish rectified Electrolytic Capacitor short testing in + B line, check all possible damaged components on +B line.<br>(Use random selected set for inspection) | |

# A/V INPUT AND OUTPUT CHECKING

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | VIDEO AND AUDIO OUTPUT CHECK | (1) Receive the "PAL Color Bar" signal (100% White Color Bar, Sound 400 Hz 100% Mod).<br>(2) Terminate the Video output with a 75 ohm impedance. Make sure the output is as specified (1.0 Vp-p ± 3 dB)<br>(3) Terminate the Audio output with a 10 Kohm impedance. Make sure the O/P is as specified (1.76 Vp-p ± 3 dB) | |
| 2 | VIDEO AND AUDIO INPUT CHECK | (1) Using the TV/AV key on the remote controller, make sure that the modes change in order of TV, AV1, AV2 & TV again and the video & audio output are according to the input terminal for each mode. | |

# FUNCTION OPERATION CHECKING (1) (VIDEO & AUDIO)

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 1 | CONTRAST Key | (1) Receive "Monoscope Pattern" signal.<br>(2) Set P-Mode to select CONTRAST.<br>(3) Press Volume Up/Down key to check whether the CONTRAST effect is OK or not. | |
| 2 | COLOUR Key | (1) Receive "Color Bar" signal.<br>(2) Set P-Mode to select COLOUR.<br>(3) Press Volume Up/Down key to check whether the COLOUR effect is OK or not. | |
| 3 | BRIGHTNESS Key | (1) Receive "Monoscope Pattern" signal.<br>(2) Set P-Mode to select BRIGHTNESS.<br>(3) Press Volume Up/Down key to check whether the BRIGHTNESS effect is OK or not. | |
| 4 | TINT Key | (1) Receive the "NTSC Colour Bar" signal thru AV in.<br>(2) Set P-Mode to select TINT.<br>(3) Press Volume Up/Down key to check TINT, UP for GREEN direction and DOWN for PURPLE direction whether is OK or not. | |
| 5 | SHARPNESS Key | (1) Receive "Monoscope Pattern" signal.<br>(2) Set P-mode to select SHARPNESS.<br>(3) Press Volume Up/Down key to check whether the SHARPNESS effect is OK or not. | |
| 6 | CH DISPLAY COLOUR | (1) All Ch (1~99) will have an OSD display of the channel number in green colour under AFT ON condition. | |
| 7 | NORMAL Key | (1) Once in PICTURE Mode, and the NORMAL key is pressed, all the settings will be present to normal setting.<br>(Normal setting value for every mode).<br>CONTRAST : MAX<br>COLOUR : CENTER<br>BRIGHTNESS : CENTER<br>TINT : CENTER<br>SHARPNESS : CENTER | |
| 8 | WHITE TEMP | (1) Receive "Monoscope Pattern" signal.<br>(2) Set FUNCTION to select WHITE TEMP.<br>(3) Press Volume Up/Down key to check WHITE TEMP Option, STANDARD: NORMAL SETTING, WARM for more REDDISH direction changing, COOL for more BLUISH direction changing. | |
| 9 | COLOUR SYSTEM | (1) Receive the "PAL COLOUR BAR" signal, press the COLOUR SYSTEM key to select modes except PAL, check the COLOUR is not working properly. Then, select the "PAL" mode. Check again its colour so that it is working properly.<br>(2) Receive "NTSC 4.43/3.58 COLOUR BAR" signal thru AV, press COLOUR SYSTEM key to select modes except N4.43/3.58, check the COLOUR is not working properly. Then, select the "NTSC 4.43/3.58" mode. Check again its colour so that it is working properly. | |

# FUNCTION OPERATION CHECKING (2) (VIDEO & AUDIO)

| NO | ADJUSTMENT POINT | ADJUSTMENT CONDITION / PROCEDURE | WAVEFORM OR OTHERS |
|---|---|---|---|
| 10 | SOUND SYSTEM | (1) Receive "PAL-B/G" signal, check the sound output is working properly or not. | |
| 11 | NOISE MUTE CHECKING | (1) Receive "PAL COLOUR BAR" signal.<br>(2) Turn up the volume control to maximum, make sure the sound is heard from the speakers. Then put the unit in no signal state.<br>(3) Check the sound mute is effective.<br>(4) Finally turn sound level of CTV to minimum. | |
| 12 | OSD LANGUAGE QUANTITY CHECK | Check OSD LANGUAGE quantity and type. | |

# MEMORY MAP

| MODEL : | TV MICOM ENGINEERING | | TV DESIGN ENGINEERING | | TV PRODUCTION ENGINEERING | |
|---|---|---|---|---|---|---|
| | ISSUED DATE : | | ISSUED DATE : | | ISSUED DATE : | |
| PROCESS | MANAGER | | MANAGER | | MANAGER | |
| EEPROM CHECK DATA LIST 1 | CHIEF | | CHIEF | | CHIEF | |
| | ENGINEER | | ENGINEER | | ENGINEER | |

SLAVE ADDRESS : A0 (00~FF) A2 (100~1FF)

| ADDRESS | DATA | | | | | | | | MICON | EEPROM | EEPROM | CHASSIS | | CTV FINAL | | LAST INITIAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (HEX) | D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | DEFAULT | RANGE | WRITE(CPU) | CHECK DATA | CHECK TYPE | CHECK DATA | CHECK TYPE | SETTING DATA | REMARK |
| 00 | PASS WORD | | | | | | | | 55 | 00-FF | | | | | | | |
| 01 | PASS WORD | | | | | | | | 4F | 00-FF | | | | | | | |
| 02 | PASS WORD | | | | | | | | 43 | 00-FF | | | | | | | |
| 03 | PASS WORD | | | | | | | | A1 | 00-FF | | | | | | | |
| 04 | | | | | | | | | | | | | | | | | |
| 05 | | | | | | | | | | | | | | | | | |
| 06 | AGC TAKE-OVER | | | | | | | | 0E | 00-3F | | | | | | | |
| 07 | V-SLOPE | | | | | | | | 20 | 00-3F | | | | | | | |
| 08 | V-AMPLITUDE | | | | | | | | 20 | 00-3F | | | | | | | |
| 09 | V-CENTER | | | | | | | | 20 | 00-3F | | | | | | | |
| 0A | H-CENTER | | | | | | | | 20 | 00-3F | | | | | | | |
| 0B | H-SIZE | | | | | | | | 20 | 00-3F | | | | | | | |
| 0C | EW-PARALLELOGRAM | | | | | | | | 20 | 00-3F | | | | | | | |
| 0D | EW-PARABOLA/WIDTH | | | | | | | | 20 | 00-3F | | | | | | | |
| 0E | EW-UPPER CORNER | | | | | | | | 20 | 00-3F | | | | | | | |
| 0F | EW-LOWER CORNER | | | | | | | | 20 | 00-3F | | | | | | | |
| 10 | EW-TRAPEZIUM | | | | | | | | 20 | 00-3F | | | | | | | |
| 11 | HORIZONTAL-BOW | | | | | | | | 20 | 00-3F | | | | | | | |
| 12 | S-CORRECTION | | | | | | | | 00 | 00-3F | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | |
| 16 | DRIVE-R (STANDARD) | | | | | | | | 20 | 00-3F | | | | | | | |
| 17 | DRIVE-G (STANDARD) | | | | | | | | 20 | 00-3F | | | | | | | |
| 18 | DRIVE-B (STANDARD) | | | | | | | | 20 | 00-3F | | | | | | | |
| 19 | DRIVE-R (WARM) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1A | DRIVE-G (WARM) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1B | DRIVE-B (WARM) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1C | DRIVE-R (COOL) | | | | | | | | 19 | 00-3F | | | | | | | |
| 1D | DRIVE-G (COOL) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1E | DRIVE-B (COOL) | | | | | | | | 20 | 00-3F | | | | | | | |
| 1F | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | | |
| 22 | SUB-VOLUME | | | | | | | | 3F | 00-3F | | | | | | | |
| 23 | SUB-CONTRAST | | | | | | | | 3F | 00-3F | | | | | | | |
| 24 | SUB-COLOUR | | | | | | | | 20 | 00-3F | | | | | | | |
| 25 | SUB-BRIGHTNESS | | | | | | | | 20 | 00-3F | | | | | | | |
| 26 | SUB-TINT | | | | | | | | 20 | 00-3F | | | | | | | |
| 27 | SUB-SHARPNESS | | | | | | | | 20 | 00-3F | | | | | | | |
| 28 | HTL-VOLUME | | | | | | | | 20 | 00-3F | | | | | | | |
| 29 | HTL-POSITION | | | | | | | | FF | 00-FF | | | | | | | |
| 2A | | | | | | | | | | | | | | | | | |
| 2B | | | | | | | | | | | | | | | | | |
| 2C | | | | | | | | | | | | | | | | | |
| 2D | OSD-REFERENCE | | | | | | | | 0F | 00-0F | | | | | | | |
| 2E | CUTOFF LEVEL-OFFSET R | | | | | | | | 08 | 00-0F | | | | | | | |
| 2F | CUTOFF LEVEL-OFFSET B | | | | | | | | 08 | 00-0F | | | | | | | |
| 30 | CATHODE DRIVE LEVEL | | | | | | | | 00 | 00-0F | | | | | | | |
| 31 | Y-DELAY (TV PAL) | | | | | | | | 0C | 00-0F | | | | | | | |
| 32 | Y-DELAY (TV SECAM) | | | | | | | | 0F | 00-0F | | | | | | | |
| 33 | Y-DELAY (TV N358) | | | | | | | | 0C | 00-0F | | | | | | | |
| 34 | Y-DELAY (TV N443) | | | | | | | | 0C | 00-0F | | | | | | | |
| 35 | Y-DELAY (TV BW) | | | | | | | | 0C | 00-0F | | | | | | | |
| 36 | Y-DELAY (AV PAL) | | | | | | | | 0C | 00-0F | | | | | | | |
| 37 | Y-DELAY (AV SECAM) | | | | | | | | 0F | 00-0F | | | | | | | |
| 38 | Y-DELAY (AV N443) | | | | | | | | 0C | 00-0F | | | | | | | |
| 39 | Y-DELAY (AV N358) | | | | | | | | 0C | 00-0F | | | | | | | |
| 3A | Y-DELAY (AV BW) | | | | | | | | 0C | 00-0F | | | | | | | |
| 3B | COLOUR-OFFSET (PAL) | | | | | | | | 08 | 00-0F | | | | | | | |
| 3C | COLOUR-OFFSET (SECAM) | | | | | | | | 08 | 00-0F | | | | | | | |
| 3D | COLOUR-OFFSET (N443) | | | | | | | | 04 | 00-0F | | | | | | | |
| 3E | COLOUR-OFFSET (N358) | | | | | | | | 04 | 00-0F | | | | | | | |
| 3F | SHARPNESS-OFFSET (PAL) | | | | | | | | 08 | 00-0F | | | | | | | |
| 40 | SHARPNESS-OFFSET (SECAM) | | | | | | | | 04 | 00-0F | | | | | | | |
| 41 | SHARPNESS-OFFSET (N443) | | | | | | | | 0C | 00-0F | | | | | | | |
| 42 | SHARPNESS-OFFSET (N358) | | | | | | | | 08 | 00-0F | | | | | | | |
| 43 | | | | | | | | | | | | | | | | | |
| 44 | FCO | ACL | OSO | EHT | EVG | FFI | AVL | BKS | | 00-FF | | | | | | | |
| 45 | SCM | N443 | N358 | PB-SEC | BG | I | DK | M | | 00-FF | | | | | | | |
| 46 | SM | | FMWS | AV | BTSC | HTL | VMC | VMI | | 00-FF | | | | | | | |
| 47 | HP2 | FSL | RUS | FRA | CHN | MLY | ARB | THA | | 00-FF | | | | | | | |
| 48 | | | | | AGC | | BIL | OBA | | | | | | | | | |
| 49 | | | | | | | | | | | | | | | | | |
| 4A | | | | | | | | | | | | | | | | | |
| 4B | | | | | | | | | | | | | | | | | |
| 4C | VOLUME | | | | | | | | 01 | 00-3C | | | | | | | |
| 4D | CONTRAST | | | | | | | | 3C | 00-3C | | | | | | | |
| 4E | COLOUR | | | | | | | | 1E | 00-3C | | | | | | | |
| 4F | BRIGHTNESS | | | | | | | | 1E | 00-3C | | | | | | | |
| 50 | TINT | | | | | | | | 1E | 00-3C | | | | | | | |
| 51 | SHARPNESS | | | | | | | | 1E | 00-3C | | | | | | | |
| 52 | | | | | | | | | | | | | | | | | |
| 53 | | | | | | | | | | | | | | | | | |
| 54 | | | | | | | | | | | | | | | | | |
| 55 | POSITION/AV1/AV2 | | | | | | | | 01 | 00-FF | | | | | | | |
| 56 | FAV-POS A | | | | | | | | 0A | 00-FF | | | | | | | |
| 57 | FAV-POS B | | | | | | | | 14 | 00-FF | | | | | | | |
| MODEL | | | | | | | | | | MODEL | | | | | | | |
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| LETTER NO. | | | | | | | | | | LETTER NO. | | | | | | | |

# MEMORY MAP (Continued)

| MODEL : | TV MICOM ENGINEERING | | TV DESIGN ENGINEERING | | TV PRODUCTION ENGINEERING | |
|---|---|---|---|---|---|---|
| | ISSUED DATE : | | ISSUED DATE : | | ISSUED DATE : | |
| PROCESS | MANAGER | | MANAGER | | MANAGER | |
| EEPROM CHECK DATA LIST 2 | CHIEF | | CHIEF | | CHIEF | |
| | ENGINEER | | ENGINEER | | ENGINEER | |

SLAVE ADDRESS : A0 (00~FF) A2 (100~1FF)

| ADDRESS | DATA | | | | | | | | MICON | EEPROM | EEPROM | CHASSIS | | CTV FINAL | | LAST INITIAL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (HEX) | D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | DEFAULT | RANGE | WRITE(CPU) | CHECK DATA | CHECK TYPE | CHECK DATA | CHECK TYPE | SETTING DATA | REMARK |
| 58 | FAV-POS C | | | | | | | | 1E | 00-FF | | | | | | | |
| 59 | FAV-POS D | | | | | | | | 28 | 00-FF | | | | | | | |
| 5A | | | | | | | | | | | | | | | | | |
| 5B | | | | | | | | | | | | | | | | | |
| 5C | POWER | | | | | | | | 00 | 00-01 | | | | | | | |
| 5D | WHITE-TEMP | | | | | | | | 00 | 00-02 | | | | | | | |
| 5E | BLUE BACK | | | | | | | | 00 | 00-01 | | | | | | | |
| 5F | LANGUAGE | | | | | | | | 00 | 00-07 | | | | | | | |
| 60 | DIGIT | | | | | | | | 00 | 00-01 | | | | | | | |
| 61 | | | | | | | | | | | | | | | | | |
| 62 | SKIP 0 | SKIP 1 | SKIP 2 | SKIP 3 | SKIP 4 | SKIP 5 | SKIP 6 | SKIP 7 | 80 | 00-FF | | | | | | | |
| 63 | SKIP 8 | SKIP 9 | SKIP 10 | SKIP 11 | SKIP 12 | SKIP 13 | SKIP 14 | SKIP 15 | 00 | 00-FF | | | | | | | |
| 64 | SKIP 16 | SKIP 17 | SKIP 18 | SKIP 19 | SKIP 20 | SKIP 21 | SKIP 22 | SKIP 23 | 00 | 00-FF | | | | | | | |
| 65 | SKIP 24 | SKIP 25 | SKIP 26 | SKIP 27 | SKIP 28 | SKIP 29 | SKIP 30 | SKIP 31 | 00 | 00-FF | | | | | | | |
| 66 | SKIP 32 | SKIP 33 | SKIP 34 | SKIP 35 | SKIP 36 | SKIP 37 | SKIP 38 | SKIP 39 | 00 | 00-FF | | | | | | | |
| 67 | SKIP 40 | SKIP 41 | SKIP 42 | SKIP 43 | SKIP 44 | SKIP 45 | SKIP 46 | SKIP 47 | 00 | 00-FF | | | | | | | |
| 68 | SKIP 48 | SKIP 49 | SKIP 50 | SKIP 51 | SKIP 52 | SKIP 53 | SKIP 54 | SKIP 55 | 00 | 00-FF | | | | | | | |
| 69 | SKIP 56 | SKIP 57 | SKIP 58 | SKIP 59 | SKIP 60 | SKIP 61 | SKIP 62 | SKIP 63 | 00 | 00-FF | | | | | | | |
| 6A | SKIP 64 | SKIP 65 | SKIP 66 | SKIP 67 | SKIP 68 | SKIP 69 | SKIP 70 | SKIP 71 | 00 | 00-FF | | | | | | | |
| 6B | SKIP 72 | SKIP 73 | SKIP 74 | SKIP 75 | SKIP 76 | SKIP 77 | SKIP 78 | SKIP 79 | 00 | 00-FF | | | | | | | |
| 6C | SKIP 80 | SKIP 81 | SKIP 82 | SKIP 83 | SKIP 84 | SKIP 85 | SKIP 86 | SKIP 87 | 00 | 00-FF | | | | | | | |
| 6D | SKIP 88 | SKIP 89 | SKIP 90 | SKIP 91 | SKIP 92 | SKIP 93 | SKIP 94 | SKIP 95 | 00 | 00-FF | | | | | | | |
| 6E | SKIP 96 | SKIP 97 | SKIP 98 | SKIP 99 | | | | | 00 | 00-FF | | | | | | | |
| 6F | | | | | | | | | | | | | | | | | |
| 70 | | | | | | | | | | | | | | | | | |
| 71 | | | | | | | | | | | | | | | | | |
| 72 | | | | | | | | | | | | | | | | | |
| 73 | | | | | | | | | | | | | | | | | |
| 74 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | S-SYS | | | | | | POS 0 |
| 75 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | 000:BG | | | | | | |
| 76 | S-SYS | | | AFT | | (auto) | | C-SYS | | | 001:I | | | | | | |
| 77 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | 010:DK | | | | | | POS 1 |
| 78 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | 011:M | | | | | | |
| 79 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 7A | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | AFT | | | | | | POS 2 |
| 7B | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | 0:OFF | | | | | | |
| 7C | S-SYS | | | AFT | | (auto) | | C-SYS | | | 1:ON | | | | | | |
| 7D | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 3 |
| 7E | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 7F | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 80 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 4 |
| 81 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 82 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 83 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 5 |
| 84 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 85 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 86 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 6 |
| 87 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 88 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 89 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 7 |
| 8A | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 8B | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 8C | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 8 |
| 8D | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 8E | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 8F | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 9 |
| 90 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 91 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 92 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 10 |
| 93 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 94 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 95 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 11 |
| 96 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 97 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 98 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 12 |
| 99 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 9A | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 9B | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 13 |
| 9C | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 9D | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 9E | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 14 |
| 9F | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| A0 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| A1 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 15 |
| A2 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| A3 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| A4 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 16 |
| A5 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| A6 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| A7 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 17 |
| A8 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| A9 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| AA | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 18 |
| AB | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| AC | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| AD | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 19 |
| AE | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| AF | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| | MODEL | | | | | | | | | MODEL | | | | | | | |
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| | LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | |

# MEMORY MAP (Continued)

| MODEL : | TV MICOM ENGINEERING | | TV DESIGN ENGINEERING | | TV PRODUCTION ENGINEERING | |
|---|---|---|---|---|---|---|
| | ISSUED DATE : | | ISSUED DATE : | | ISSUED DATE : | |
| PROCESS | MANAGER | | MANAGER | | MANAGER | |
| EEPROM CHECK DATA LIST 3 | CHIEF | | CHIEF | | CHIEF | |
| | ENGINEER | | ENGINEER | | ENGINEER | |

SLAVE ADDRESS : A0 (00~FF) A2 (100~1FF)

| ADDRESS | DATA | | | | | | | | MICON | EEPROM | S-SYS | CHASSIS | | CTV FINAL | | LAST INITIAL | POS 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (HEX) | D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | DEFAULT | RANGE | WRITE(CPU) | CHECK DATA | CHECK TYPE | CHECK DATA | CHECK TYPE | SETTING DATA | REMARK |
| B0 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 20 |
| B1 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| B2 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| B3 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 21 |
| B4 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| B5 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| B6 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 22 |
| B7 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| B8 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| B9 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 23 |
| BA | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| BB | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| BC | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 24 |
| BD | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| BE | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| BF | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 25 |
| C0 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| C1 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| C2 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 26 |
| C3 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| C4 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| C5 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 27 |
| C6 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| C7 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| C8 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 28 |
| C9 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| CA | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| CB | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 29 |
| CC | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| CD | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| CE | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 30 |
| CF | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| D0 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| D1 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 31 |
| D2 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| D3 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| D4 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 32 |
| D5 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| D6 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| D7 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 33 |
| D8 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| D9 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| DA | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 34 |
| DB | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| DC | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| DD | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 35 |
| DE | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| DF | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| E0 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 36 |
| E1 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| E2 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| E3 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 37 |
| E4 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| E5 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| E6 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 38 |
| E7 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| E8 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| E9 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 39 |
| EA | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| EB | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| EC | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 40 |
| ED | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| EE | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| EF | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 41 |
| F0 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| F1 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| F2 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 42 |
| F3 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| F4 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| F5 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 43 |
| F6 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| F7 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| F8 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 44 |
| F9 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| FA | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| FB | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 45 |
| FC | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| FD | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| FE | | | | | | | | | | | | | | | | | POS 46 |
| FF | | | | | | | | | | | | | | | | | |
| 100 | | | | | | | | | | | | | | | | | |
| 101 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 47 |
| 102 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 103 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 104 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 48 |
| 105 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 106 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 107 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 49 |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
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# MEMORY MAP (Continued)

| MODEL : | TV MICOM ENGINEERING | TV DESIGN ENGINEERING | TV PRODUCTION ENGINEERING |
|---|---|---|---|
| | ISSUED DATE : | ISSUED DATE : | ISSUED DATE : |
| PROCESS | MANAGER | MANAGER | MANAGER |
| EEPROM CHECK DATA LIST 4 | CHIEF | CHIEF | CHIEF |
| | ENGINEER | ENGINEER | ENGINEER |

SLAVE ADDRESS : A0 (00~FF) A2 (100~1FF)

| ADDRESS | DATA | | | | | | | | MICON | EEPROM | S-SYS | CHASSIS | | CTV FINAL | | LAST INITIAL | POS 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (HEX) | D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | DEFAULT | RANGE | WRITE(CPU) | CHECK DATA | CHECK TYPE | CHECK DATA | CHECK TYPE | SETTING DATA | REMARK |
| 108 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 109 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 10A | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 50 |
| 10B | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 10C | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 10D | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 51 |
| 10E | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 10F | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 110 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 52 |
| 111 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 112 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 113 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 53 |
| 114 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 115 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 116 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 54 |
| 117 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 118 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 119 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 55 |
| 11A | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 11B | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 11C | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 56 |
| 11D | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 11E | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 11F | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 57 |
| 120 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 121 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 122 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 58 |
| 123 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 124 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 125 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 59 |
| 126 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 127 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 128 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 60 |
| 129 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 12A | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 12B | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 61 |
| 12C | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 12D | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 12E | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 62 |
| 12F | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 130 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 131 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 63 |
| 132 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 133 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 134 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 64 |
| 135 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 136 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 137 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 65 |
| 138 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 139 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 13A | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 66 |
| 13B | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 13C | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 13D | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 67 |
| 13E | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 13F | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 140 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 68 |
| 141 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 142 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 143 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 69 |
| 144 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 145 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 146 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 70 |
| 147 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 148 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 149 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 71 |
| 14A | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 14B | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 14C | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 72 |
| 14D | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 14E | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 14F | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 73 |
| 150 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 151 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 152 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 74 |
| 153 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 154 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 155 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 75 |
| 156 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 157 | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 158 | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 76 |
| 159 | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 15A | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 15B | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 77 |
| 15C | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| 15D | S-SYS | | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 15E | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | | | | | POS 78 |
| 15F | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | | | | | |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
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| LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | | |

# MEMORY MAP (Continued)

| MODEL : | TV MICOM ENGINEERING | | TV DESIGN ENGINEERING | | TV PRODUCTION ENGINEERING | |
|---|---|---|---|---|---|---|
| | ISSUED DATE : | | ISSUED DATE : | | ISSUED DATE : | |
| PROCESS | MANAGER | | MANAGER | | MANAGER | |
| EEPROM CHECK DATA LIST 5 | CHIEF | | CHIEF | | CHIEF | |
| | ENGINEER | | ENGINEER | | ENGINEER | |

SLAVE ADDRESS : A0 (00~FF) A2 (100~1FF)

| ADDRESS | DATA | | | | | | | | MICON | EEPROM | S-SYS | CHASSIS | | CTV FINAL | | LAST INITIAL | POS 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (HEX) | D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | DEFAULT | RANGE | WRITE(CPU) | CHECK DATA | CHECK TYPE | CHECK DATA | CHECK TYPE | SETTING DATA | REMARK |
| 160 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 161 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 79 |
| 162 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 163 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 164 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 80 |
| 165 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 166 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 167 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 81 |
| 168 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 169 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 16A | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 82 |
| 16B | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 16C | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 16D | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 83 |
| 16E | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 16F | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 170 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 84 |
| 171 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 172 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 173 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 85 |
| 174 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 175 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 176 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 86 |
| 177 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 178 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 179 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 87 |
| 17A | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 17B | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 17C | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 88 |
| 17D | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 17E | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 17F | | | | | | | | | | | | | | | | | POS 89 |
| 180 | | | | | | | | | | | | | | | | | |
| 181 | | | | | | | | | | | | | | | | | |
| 182 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 90 |
| 183 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 184 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 185 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 91 |
| 186 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 187 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 188 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 92 |
| 189 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 18A | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 18B | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 93 |
| 18C | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 18D | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 18E | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 94 |
| 18F | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 190 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 191 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 95 |
| 192 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 193 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 194 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 96 |
| 195 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 196 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 197 | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 97 |
| 198 | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 199 | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 19A | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 98 |
| 19B | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 19C | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 19D | | | | | TUNING FREQUANCY (HIGHER PART) | | | | | | | | | | | | POS 99 |
| 19E | | | | | TUNING FREQUANCY (LOWER PART) | | | | | | | | | | | | |
| 19F | | S-SYS | | AFT | | (auto) | | C-SYS | | | | | | | | | |
| 1A0 | | | | | | | | | | | | | | | | | AV1 |
| 1A1 | | | | | | | | | | | | | | | | | |
| 1A2 | | | | | | (auto) | | C-SYS | | | | | | | | | |
| 1A3 | | | | | | | | | | | | | | | | | AV2 |
| 1A4 | | | | | | | | | | | | | | | | | |
| 1A5 | | | | | | (auto) | | C-SYS | | | | | | | | | |
| 1A6 | | | | | | | | | | | | | | | | | |
| 1A7 | | | | | | | | | | | | | | | | | |
| 1A8 | | | | | | | | | | | | | | | | | |
| 1A9 | | | | | | | | | | | | | | | | | |
| 1AA | | | | | | | | | | | | | | | | | |
| 1AB | | | | | | | | | | | | | | | | | |
| 1AC | | | | | | | | | | | | | | | | | |
| 1AD | | | | | | | | | | | | | | | | | |
| 1AE | | | | | | | | | | | | | | | | | |
| 1AF | | | | | | | | | | | | | | | | | |
| 1B0 | | | | | | | | | | | | | | | | | |
| 1B1 | | | | | | | | | | | | | | | | | |
| 1B2 | | | | | | | | | | | | | | | | | |
| 1B3 | | | | | | | | | | | | | | | | | |
| 1B4 | | | | | | | | | | | | | | | | | |
| 1B5 | | | | | | | | | | | | | | | | | |
| 1B6 | | | | | | | | | | | | | | | | | |
| 1B7 | | | | | | | | | | | | | | | | | |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
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| LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | | |

# MEMORY MAP (Continued)

| MODEL : | TV MICOM ENGINEERING | | TV DESIGN ENGINEERING | | TV PRODUCTION ENGINEERING | |
|---|---|---|---|---|---|---|
| | ISSUED DATE : | | ISSUED DATE : | | ISSUED DATE : | |
| PROCESS | MANAGER | | MANAGER | | MANAGER | |
| EEPROM CHECK DATA LIST 6 | CHIEF | | CHIEF | | CHIEF | |
| | ENGINEER | | ENGINEER | | ENGINEER | |

SLAVE ADDRESS : A0 (00~FF) A2 (100~1FF)

| ADDRESS | DATA | | | | | | | | MICON | EEPROM | S-SYS | CHASSIS | | CTV FINAL | | LAST INITIAL | POS 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (HEX) | D7 | D6 | D5 | D4 | D3 | D2 | D1 | D0 | DEFAULT | RANGE | WRITE(CPU) | CHECK DATA | CHECK TYPE | CHECK DATA | CHECK TYPE | SETTING DATA | REMARK |
| 1B8 | | | | | | | | | | | | | | | | | |
| 1B9 | | | | | | | | | | | | | | | | | |
| 1BA | | | | | | | | | | | | | | | | | |
| 1BB | | | | | | | | | | | | | | | | | |
| 1BC | | | | | | | | | | | | | | | | | |
| 1BD | | | | | | | | | | | | | | | | | |
| 1BE | | | | | | | | | | | | | | | | | |
| 1BF | | | | | | | | | | | | | | | | | |
| 1C0 | | | | | | | | | | | | | | | | | |
| 1C1 | | | | | | | | | | | | | | | | | |
| 1C2 | | | | | | | | | | | | | | | | | |
| 1C3 | | | | | | | | | | | | | | | | | |
| 1C4 | | | | | | | | | | | | | | | | | |
| 1C5 | | | | | | | | | | | | | | | | | |
| 1C6 | | | | | | | | | | | | | | | | | |
| 1C7 | | | | | | | | | | | | | | | | | |
| 1C8 | | | | | | | | | | | | | | | | | |
| 1C9 | | | | | | | | | | | | | | | | | |
| 1CA | | | | | | | | | | | | | | | | | |
| 1CB | | | | | | | | | | | | | | | | | |
| 1CC | | | | | | | | | | | | | | | | | |
| 1CD | | | | | | | | | | | | | | | | | |
| 1CE | | | | | | | | | | | | | | | | | |
| 1CF | | | | | | | | | | | | | | | | | |
| 1D0 | | | | | | | | | | | | | | | | | |
| 1D1 | | | | | | | | | | | | | | | | | |
| 1D2 | | | | | | | | | | | | | | | | | |
| 1D3 | | | | | | | | | | | | | | | | | |
| 1D4 | | | | | | | | | | | | | | | | | |
| 1D5 | | | | | | | | | | | | | | | | | |
| 1D6 | | | | | | | | | | | | | | | | | |
| 1D7 | | | | | | | | | | | | | | | | | |
| 1D8 | | | | | | | | | | | | | | | | | |
| 1D9 | | | | | | | | | | | | | | | | | |
| 1DA | | | | | | | | | | | | | | | | | |
| 1DB | | | | | | | | | | | | | | | | | |
| 1DC | | | | | | | | | | | | | | | | | |
| 1DD | | | | | | | | | | | | | | | | | |
| 1DE | | | | | | | | | | | | | | | | | |
| 1DF | | | | | | | | | | | | | | | | | |
| 1E0 | | | | | | | | | | | | | | | | | |
| 1E1 | | | | | | | | | | | | | | | | | |
| 1E2 | | | | | | | | | | | | | | | | | |
| 1E3 | | | | | | | | | | | | | | | | | |
| 1E4 | | | | | | | | | | | | | | | | | |
| 1E5 | | | | | | | | | | | | | | | | | |
| 1E6 | | | | | | | | | | | | | | | | | |
| 1E7 | | | | | | | | | | | | | | | | | |
| 1E8 | | | | | | | | | | | | | | | | | |
| 1E9 | | | | | | | | | | | | | | | | | |
| 1EA | | | | | | | | | | | | | | | | | |
| 1EB | | | | | | | | | | | | | | | | | |
| 1EC | | | | | | | | | | | | | | | | | |
| 1ED | | | | | | | | | | | | | | | | | |
| 1EE | | | | | | | | | | | | | | | | | |
| 1EF | | | | | | | | | | | | | | | | | |
| 1F0 | | | | | | | | | | | | | | | | | |
| 1F1 | | | | | | | | | | | | | | | | | |
| 1F2 | | | | | | | | | | | | | | | | | |
| 1F3 | | | | | | | | | | | | | | | | | |
| 1F4 | | | | | | | | | | | | | | | | | |
| 1F5 | | | | | | | | | | | | | | | | | |
| 1F6 | | | | | | | | | | | | | | | | | |
| 1F7 | | | | | | | | | | | | | | | | | |
| 1F8 | | | | | | | | | | | | | | | | | |
| 1F9 | | | | | | | | | | | | | | | | | |
| 1FA | | | | | | | | | | | | | | | | | |
| 1FB | | | | | | | | | | | | | | | | | |
| 1FC | | | | | | | | | | | | | | | | | |
| 1FD | | | | | | | | | | | | | | | | | |
| 1FE | | | | | | | | | | | | | | | | | |
| 1FF | | | | | | | | | | | | | | | | | |
| MODEL | | | | | | | | | MODEL | | | | | | | | |
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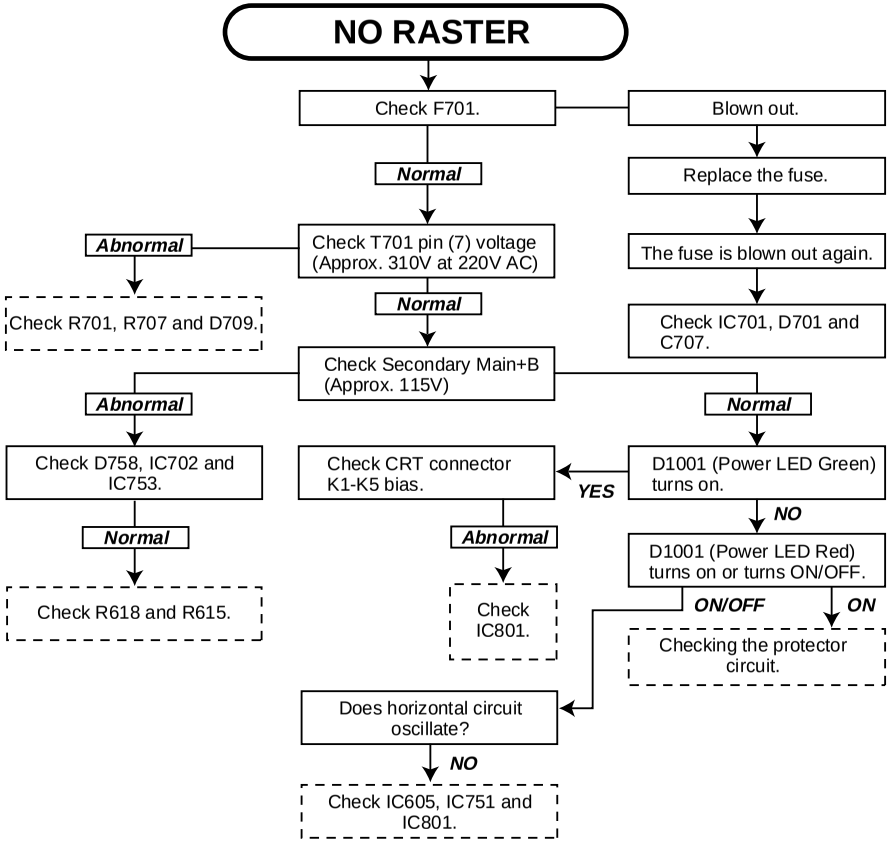
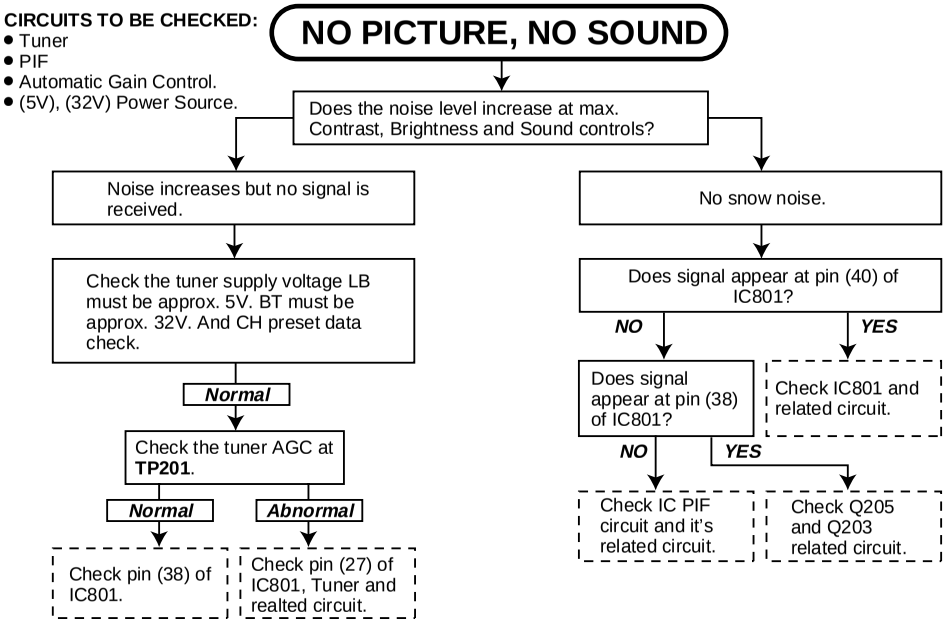
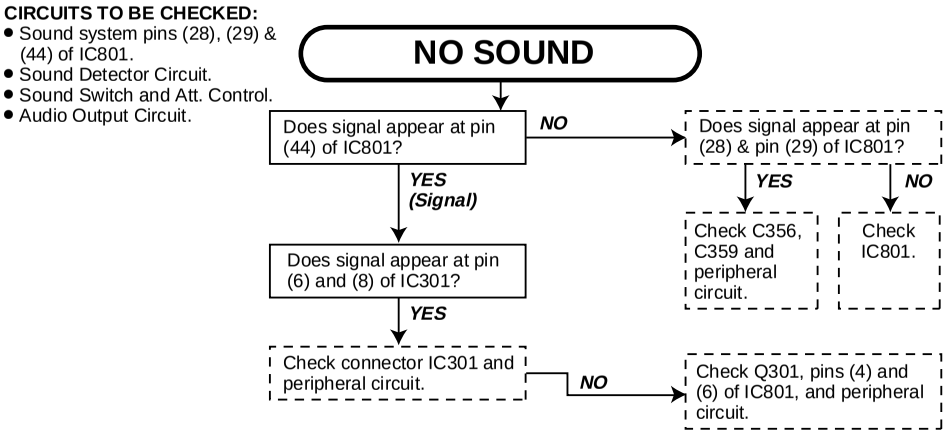
| LETTER NO. | | | | | | | | | LETTER NO. | | | | | | | | |

# TROUBLE SHOOTING TABLE




# TROUBLE SHOOTING TABLE (Continued)


CIRCUITS TO BE CHECKED:
• Tuner
• PIF
• Automatic Gain Control.
• (5V), (32V) Power Source.
NO PICTURE, NO SOUND
Does the noise level increase at max. Contrast, Brightness and Sound controls?
Noise increases but no signal is received.
No snow noise.
Check the tuner supply voltage LB must be approx. 5V. BT must be approx. 32V. And CH preset data check.
Does signal appear at pin (40) of IC801?
NO
YES
Normal
Does signal appear at pin (38) of IC801?
Check IC801 and related circuit.
Check the tuner AGC at TP201.
NO
YES
Normal
Abnormal
Check IC PIF circuit and it's related circuit.
Check Q205 and Q203 related circuit.
Check pin (38) of IC801.
Check pin (27) of IC801, Tuner and realted circuit.


CIRCUITS TO BE CHECKED:
• Sound system pins (28), (29) & (44) of IC801.
• Sound Detector Circuit.
• Sound Switch and Att. Control.
• Audio Output Circuit.
NO SOUND
Does signal appear at pin (44) of IC801?
NO
Does signal appear at pin (28) & pin (29) of IC801?
YES (Signal)
YES
NO
Check C356, C359 and peripheral circuit.
Check IC801.
Does signal appear at pin (6) and (8) of IC301?
YES
Check connector IC301 and peripheral circuit.
NO
Check Q301, pins (4) and (6) of IC801, and peripheral circuit.

## TROUBLE SHOOTING TABLE (Continued)

### NEITHER VERTICAL NOR HORIZONTAL SYNCHRONIZATION

**CIRCUIT TO BE CHECKED:**
- Sync. Separator Circuit.

Check pins (33) & (34) of IC801.

### DEFECTIVE VERTICAL AMP. AND VERTICAL LINEARITY

Re-adjust Vertical Size. (Bas Data)

Vertical Linearity and Size are abnormal.

Check R503, R506, R513, C517 and D501.

### NO VERTICAL SCAN

Check IC501.

- ***Normal*** → Check C503 amd C507.
- ***Abnormal*** → Check IC501.



## TROUBLE SHOOTING TABLE (Continued)

### NO SPECIFIC COLOUR

Is some colour produced in B/W broadcast reception?

- ***NO*** → Check IC801, R801, R802, R803, D804, D805, D806, Q801.
- ***YES*** → Is the white balance properly adjusted?
  - ***NO*** → Re-adjust the white balance.
  - ***YES*** →
    - The picture colour is cyan. → Check Q871, Q883 and its adjacent circuits.
    - The picture colour is magenta. → Check Q870, Q885 and its adjacent circuits.
    - The picture colour is yellow. → Check Q872, Q887 and its adjacent circuits.

### NO SPECIFICATION COLOUR "PAL/SECAM" (NO COLOUR SYNCHRONIZATION)

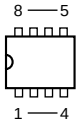
Check IC801 and Bias control circuit.

***Normal***

Check X1001 (12MHz).

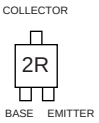
# SOLID STATE DEVICE BASE DIAGRAM

## TOP VIEW



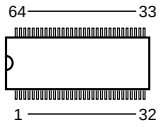

**M24C04W**

**FX0008GE**

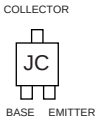



**D601A**

**B709AR**

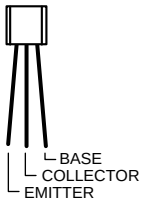



**ix3311CEN1/**
**ix3368CEN0**

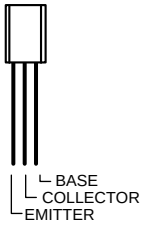



**2SC2735**

## SIDE VIEW

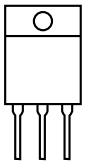



**2SA1015**
**2SC1815**

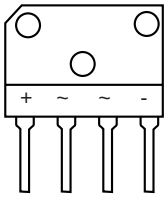



**2SC2482**

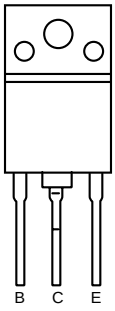
**PST573J**



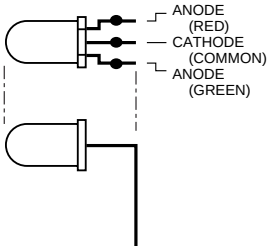
**SE115N**



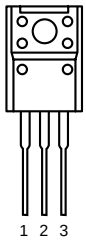

**DX0386CE**



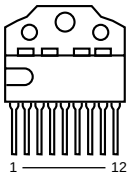

**2SD2586**



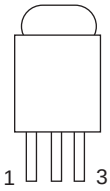

**PX0423CE**



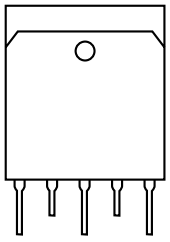

**KA7808**
**KA7805**



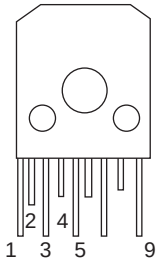

**TDA7056A**




**TA48M033**

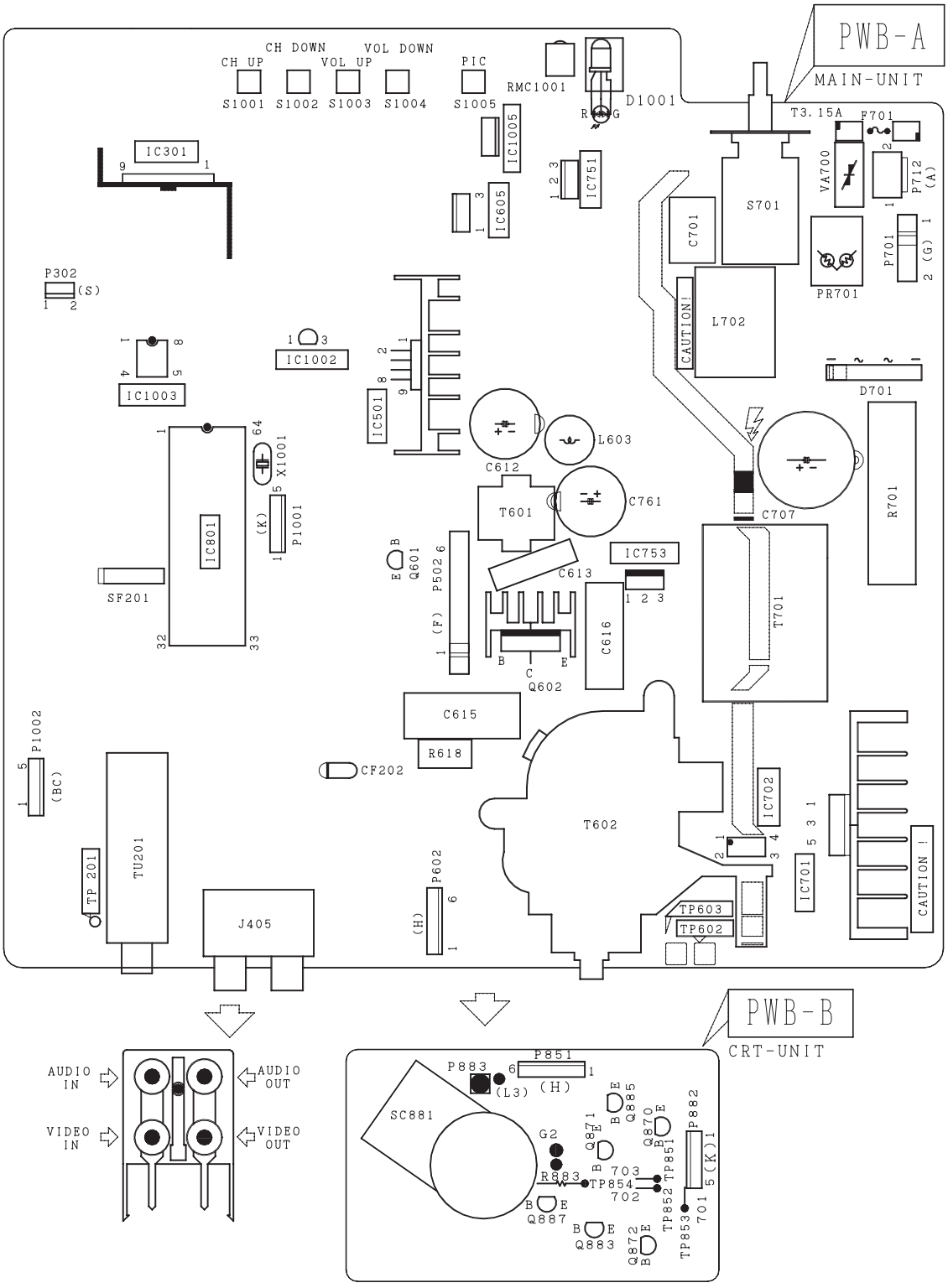


**STRF6654**




**TDA8357**

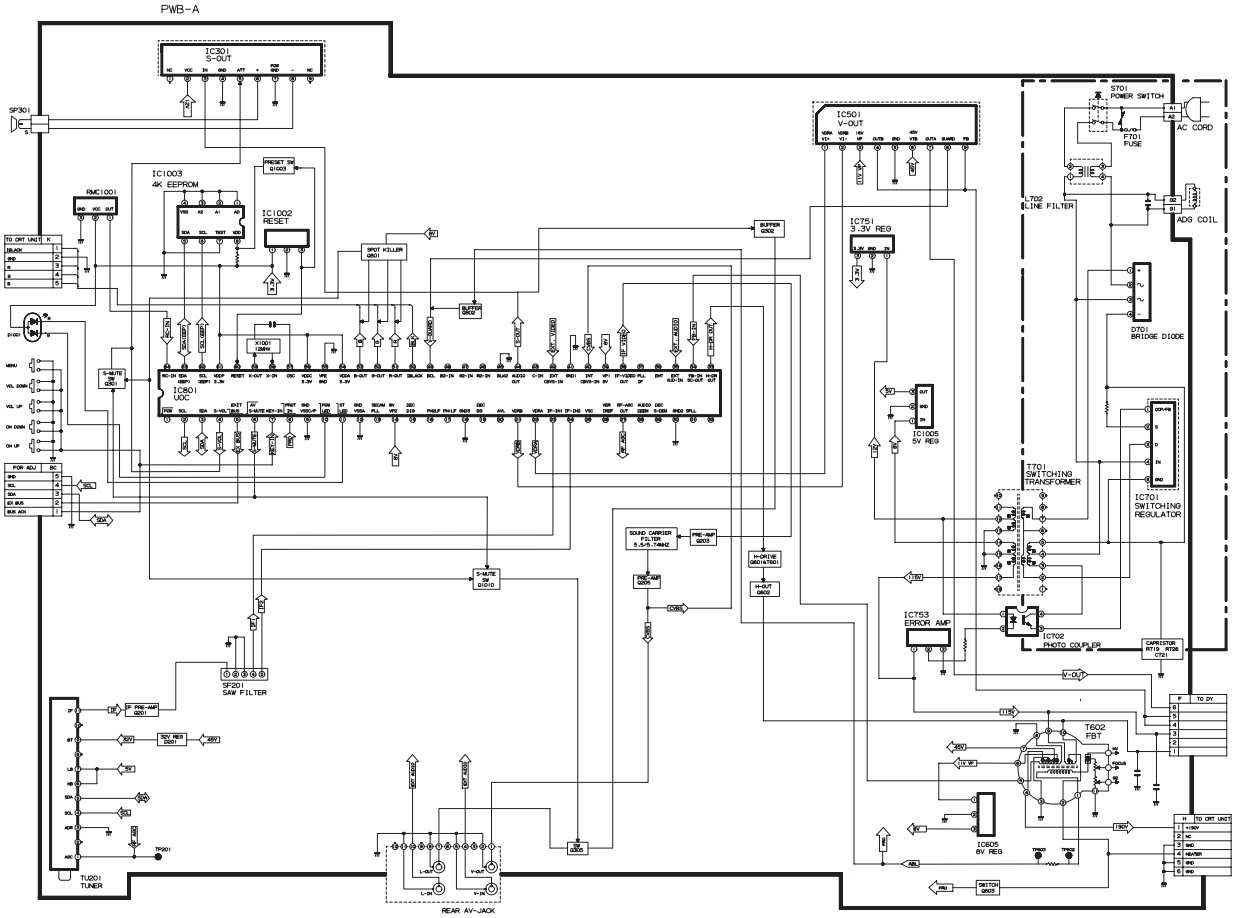
# CHASSIS LAYOUT



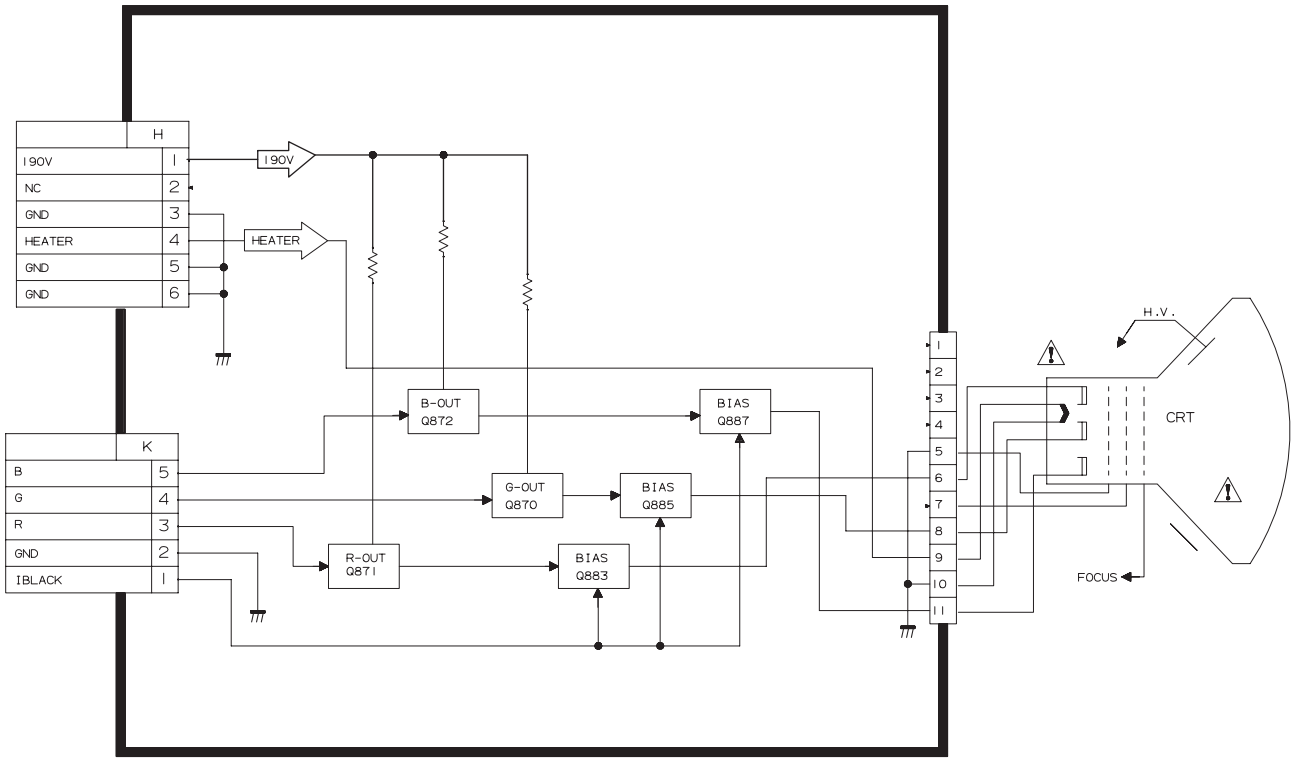
20GT-15

# BLOCK DIAGRAM

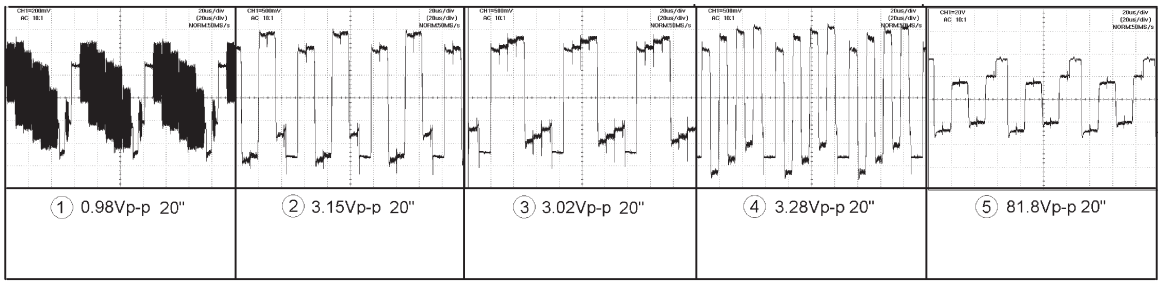
## MAIN UNIT BLOCK DIAGRAM



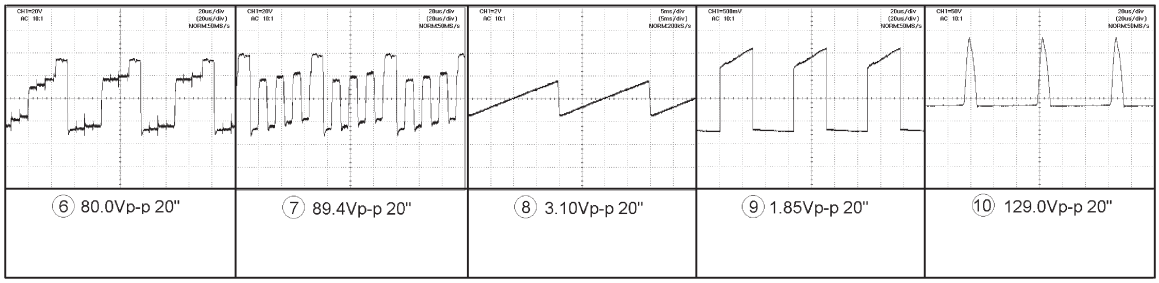
# CRT BLOCK DIAGRAM



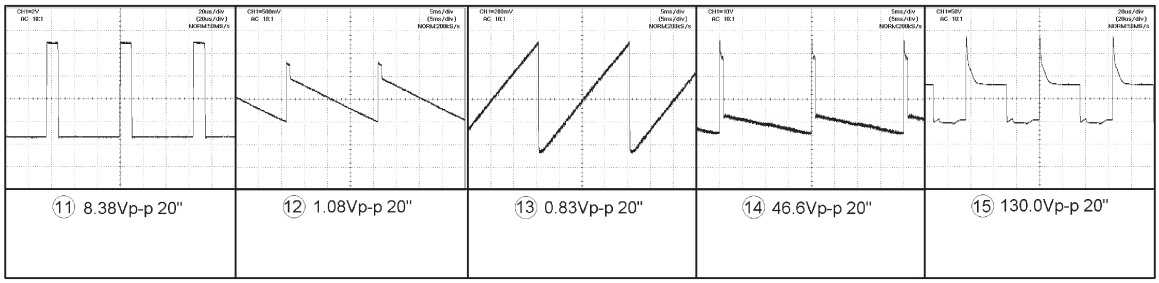
# WAVEFORMS



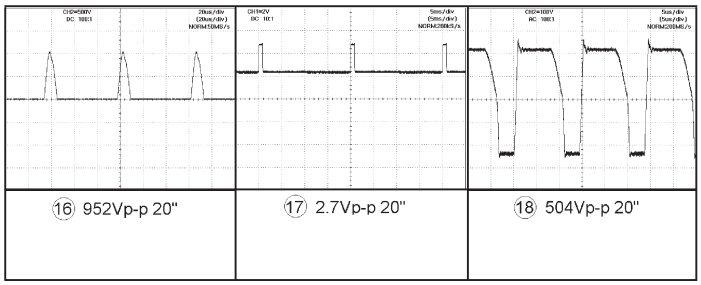
① 0.98Vp-p 20''　② 3.15Vp-p 20''　③ 3.02Vp-p 20''　④ 3.28Vp-p 20''　⑤ 81.8Vp-p 20''



⑥ 80.0Vp-p 20''　⑦ 89.4Vp-p 20''　⑧ 3.10Vp-p 20''　⑨ 1.85Vp-p 20''　⑩ 129.0Vp-p 20''



⑪ 8.38Vp-p 20''　⑫ 1.08Vp-p 20''　⑬ 0.83Vp-p 20''　⑭ 46.6Vp-p 20''　⑮ 130.0Vp-p 20''



⑯ 952Vp-p 20''　⑰ 2.7Vp-p 20''　⑱ 504Vp-p 20''

# DESCRIPTION OF SCHEMATIC DIAGRAM

### *SAFETY NOTES:*

1. *DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.*
2. *SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.*

### *IMPORTANT SAFETY NOTICE:*

*PARTS MARKED WITH "⚠" ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.*

### *SERVICE PRECAUTION:*

*THE AREA ENCLOSED BY THIS LINE (▬ ▬ ▬) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE.*
*WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AND AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.*

### *NOTES:*

1. *The unit of resistance "ohm" is omitted. (K = 1000 ohms, M = Meg ohm).*
2. *All resistors are 1/16 watt, unless otherwise noted.*
3. *All capacitors are μF, unless otherwise noted. (P = μμF).*

### *VOLTAGE MEASUREMENT CONDITIONS:*

1. *Voltage in parenthesis measured with no Signal.*
2. *Voltages without parenthesis measured with PAL Colour-Signal.*
3. *All the voltages in each point are measured high impedance voltmeter.*

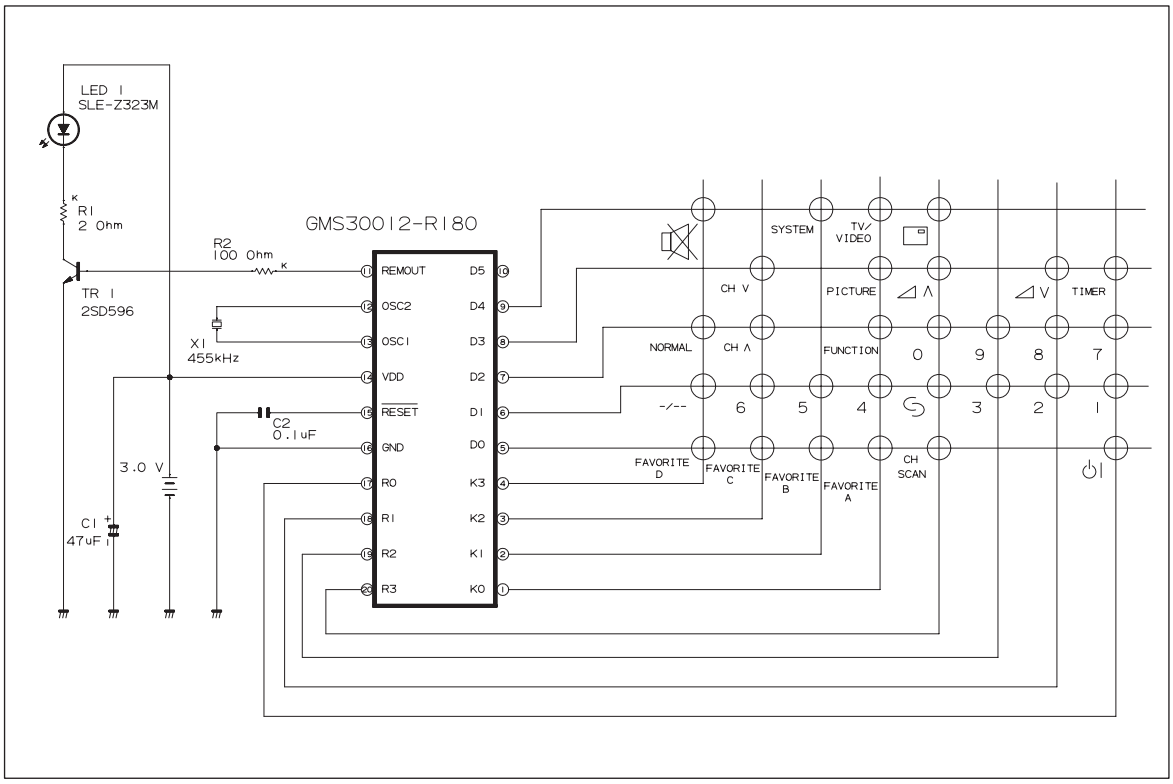
### *WAVEFORM MEASUREMENT CONDITIONS:*

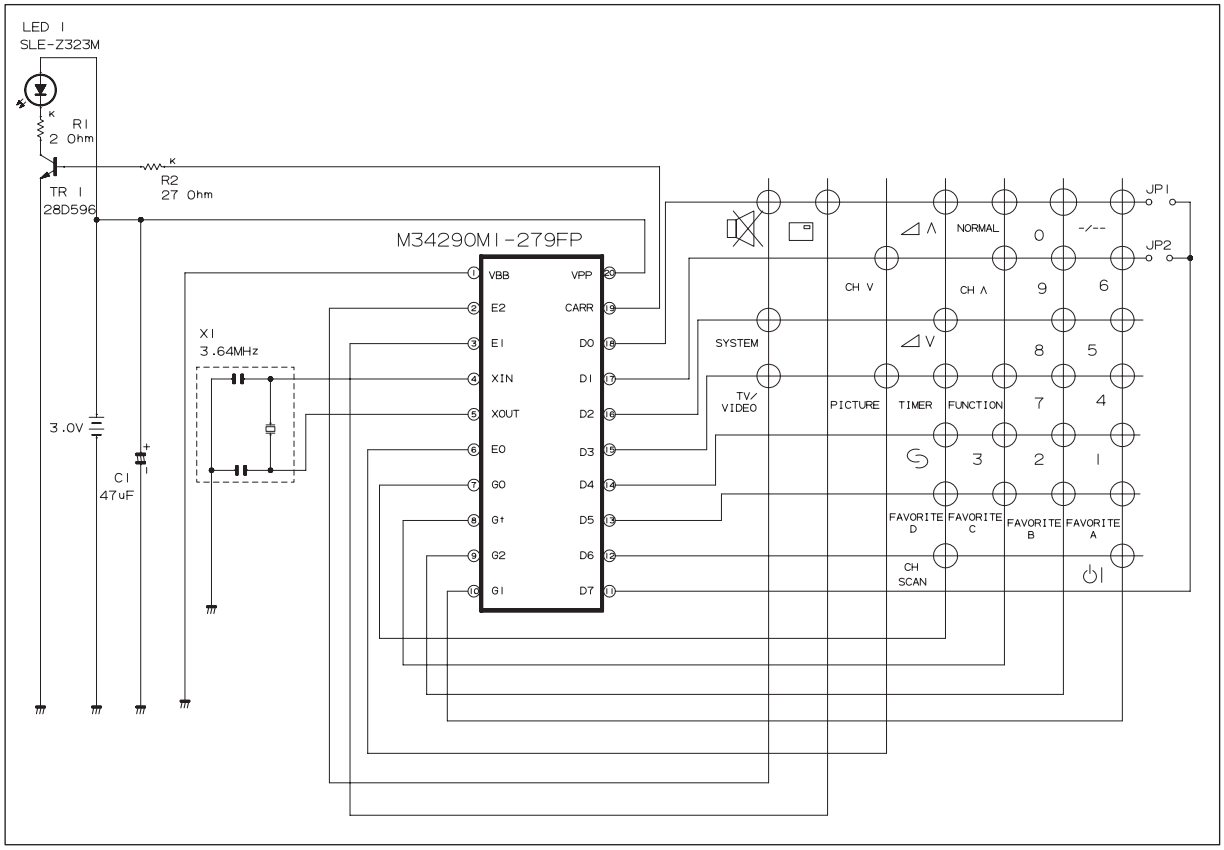
1. *Colour bar generator signal of 1.8V peak to peak applied at Base of Video Buffer Amp. Q200.*
2. *Approximately 4.0 V AGC bias.*

# SCHEMATIC DIAGRAM

## Infrared Remote Control Unit

NOTE: The parts here shown are supplied as an assembly but not independently.



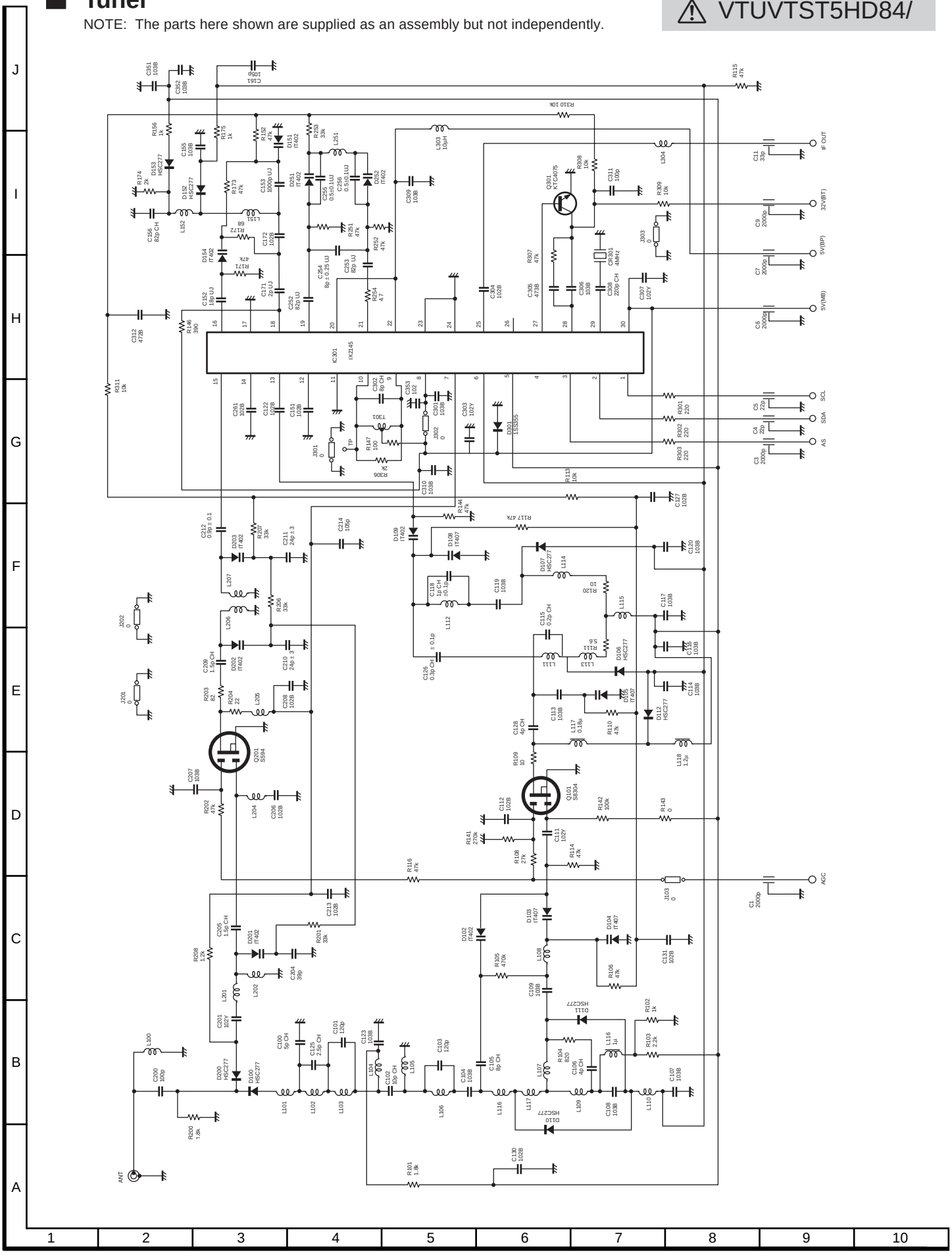




Notes
Unless specified, the resistors are 1/10W ± 5%.

## Tuner

NOTE: The parts here shown are supplied as an assembly but not independently.

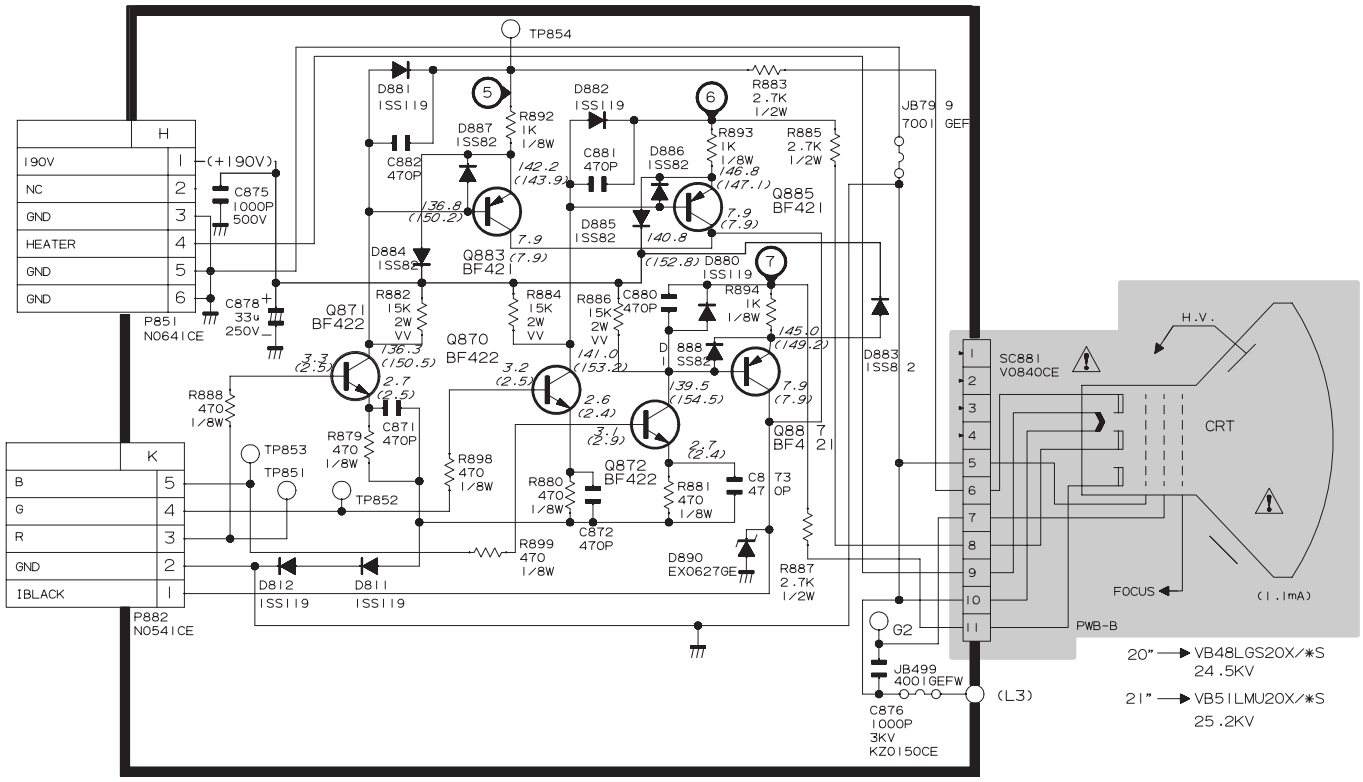
⚠ VTUVTST5HD84/



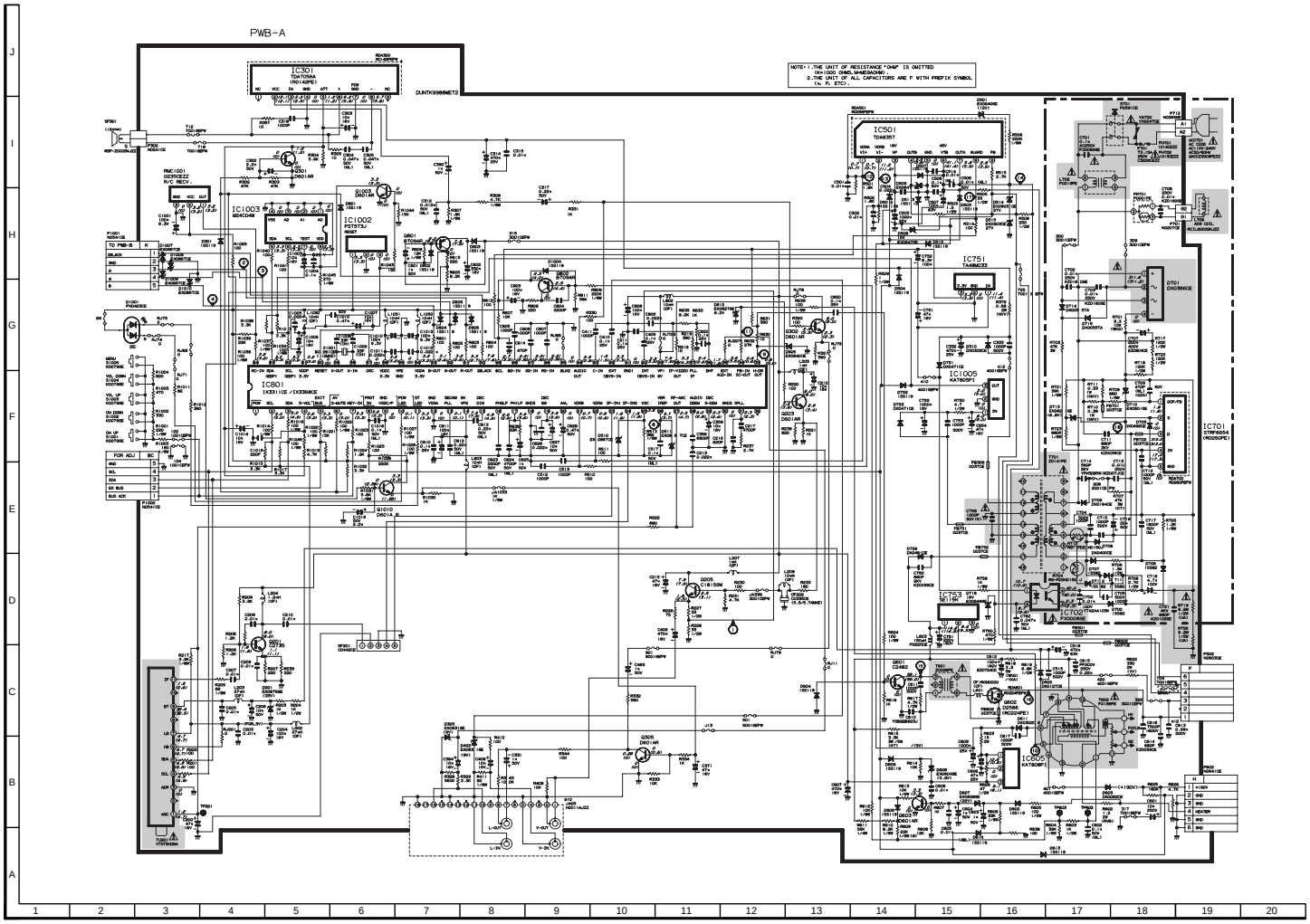
# CRT UNIT

NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16WATT.UNLESS OTHERWISE NOTED.
3.ALL CAPACITORS ARE uF.UNLESS OTHERWISE NOTED(P=uuF).

PWB-B



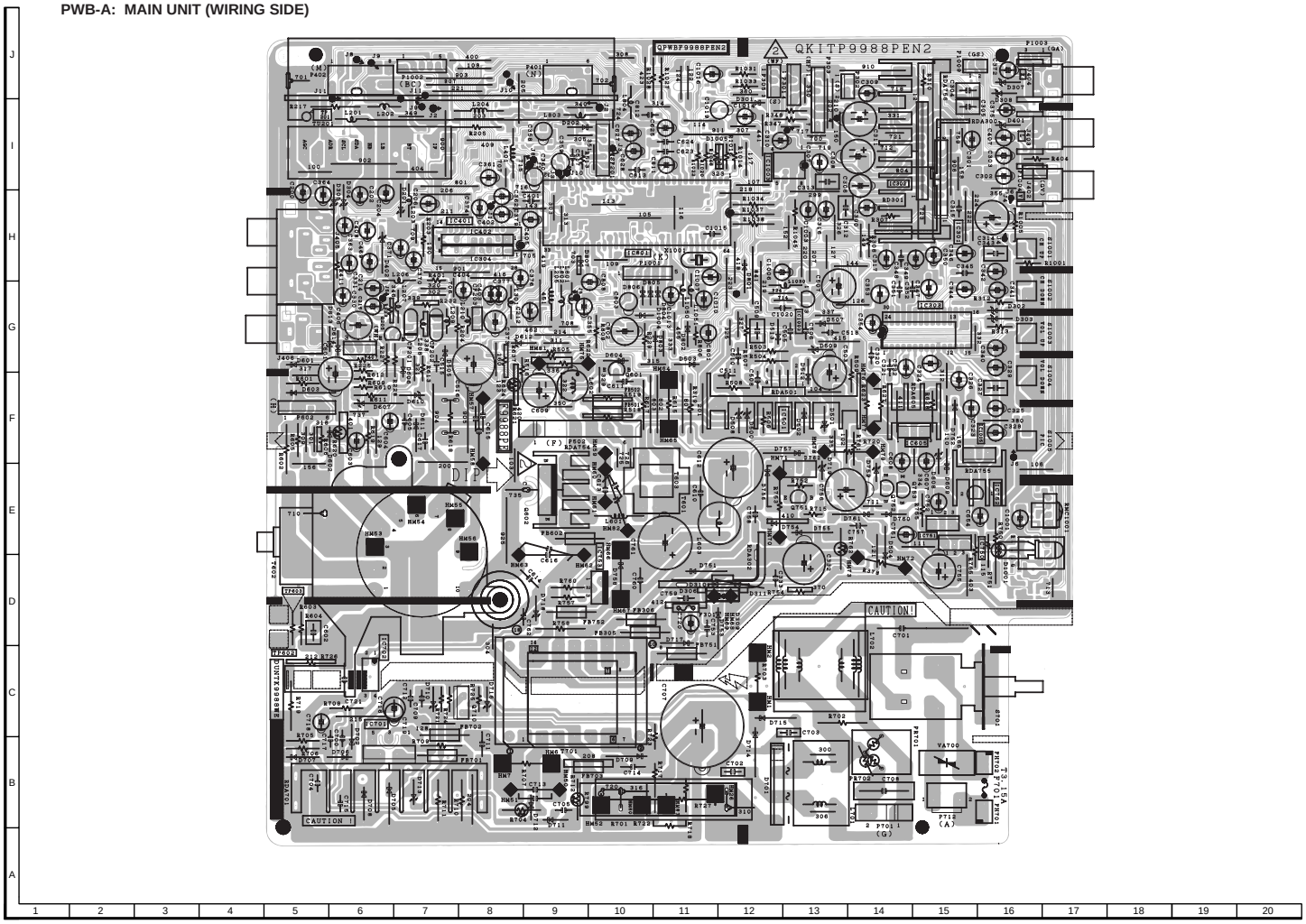
## MAIN UNIT


PWB-A
NOTE:1.THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEGAOHM)
2.THE UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u, P, ETC).
IC501
IC1003
IC1002
IC801
IC751
IC1005
IC701
IC605
J
I
H
G
F
E
D
C
B
A
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

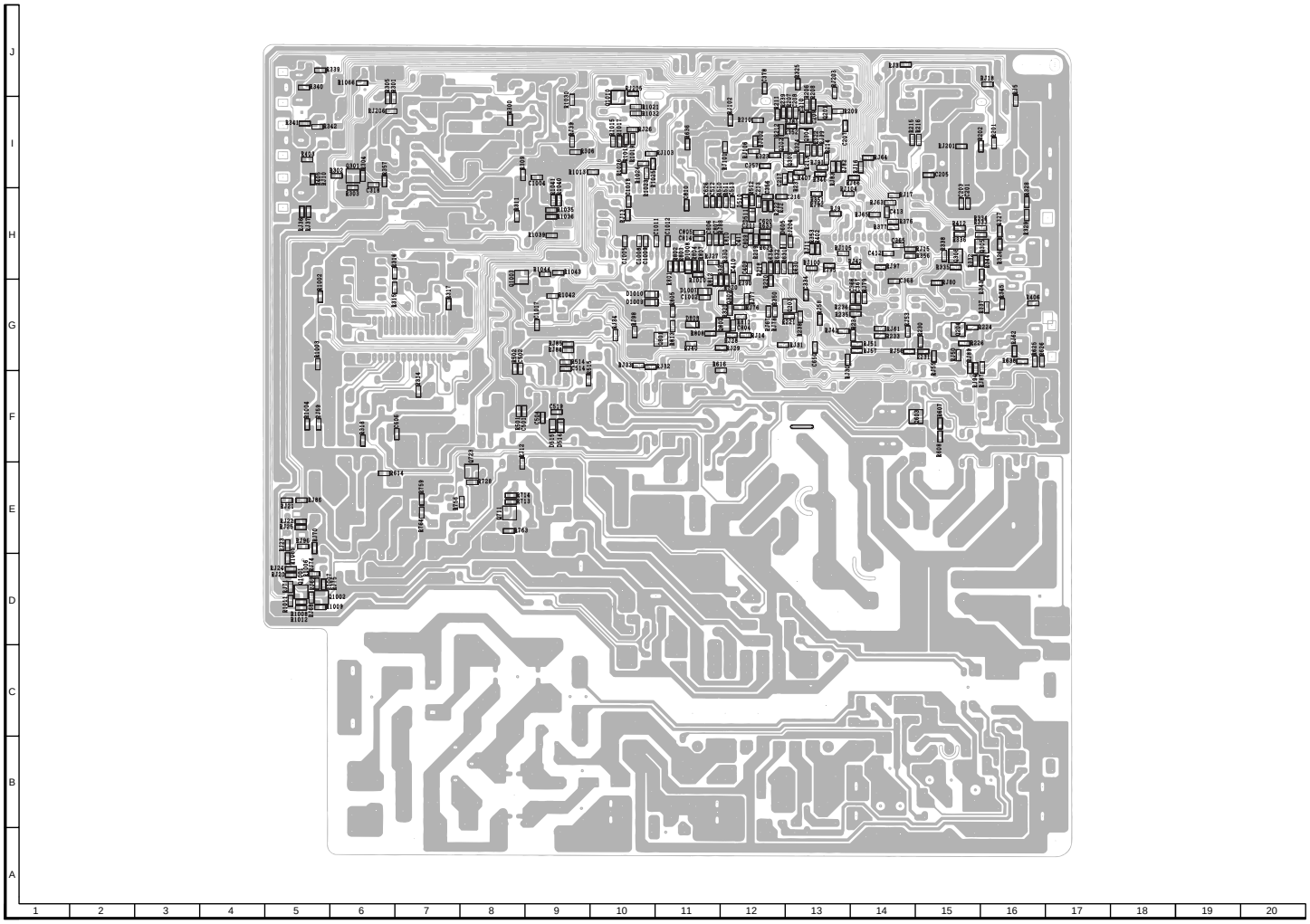
20GT-15

# PRINTED WIRING BOARD ASSEMBLIES

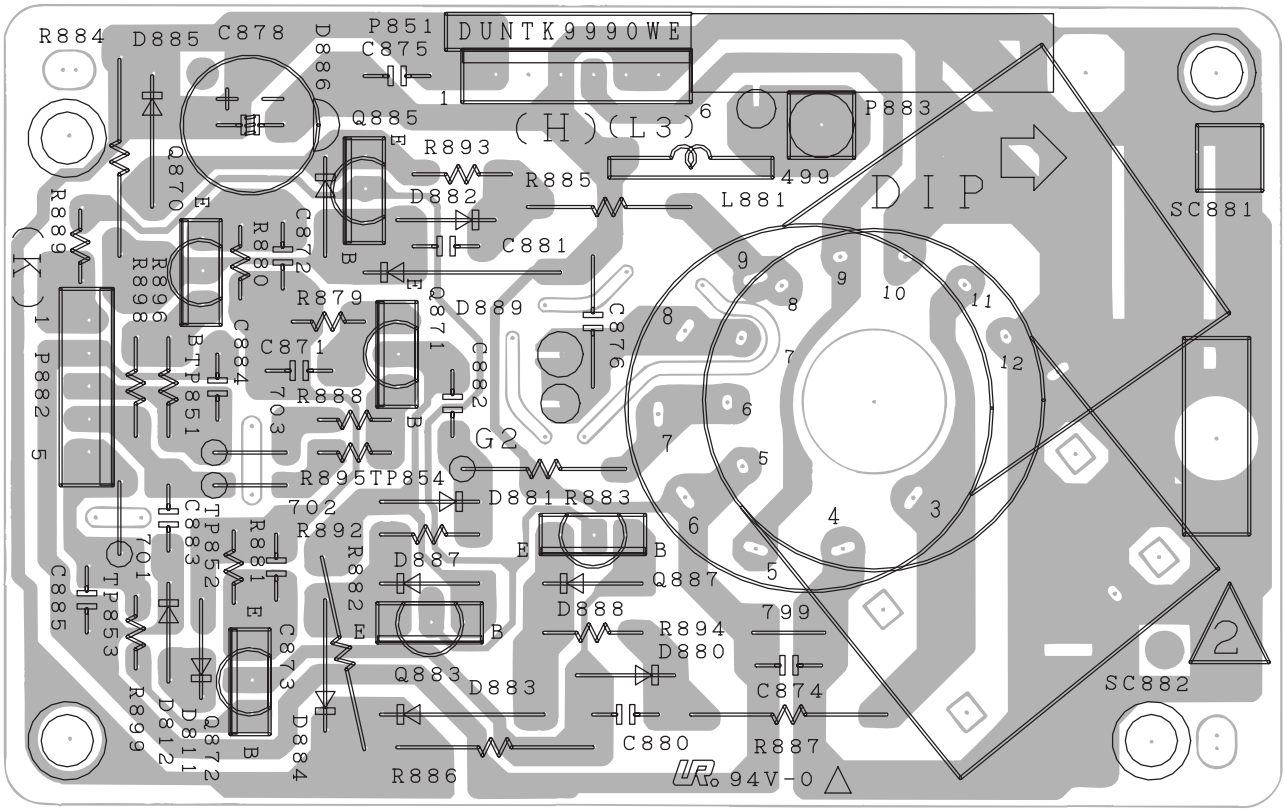
**PWB-A: MAIN UNIT (WIRING SIDE)**



**PWB-A: MAIN UNIT (WIRING SIDE) (CHIP PARTS)**



## PWB-B: CRT UNIT



# REPLACEMENT PARTS LIST

## PARTS REPLACEMENT

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" in the Replacement Parts Lists.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

### "HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

**1. MODEL NUMBER** **2. REF. NO.**
**3. PART NO.** **4. DESCRIPTION**

MARK ★ : SPARE PARTS-DELIVERY SECTION.

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| **PICTURE TUBE** | | | | |
| ⚠ | VB48LGS20X/*S | | Picture Tube | |
| ⚠ L708 | RCiLG0002KJZZ | | Degaussing Coil | |
| ⚠ | RCiLH1837CEZZ | R | Deflection Yoke | BC |
| ⚠ | QEARC2006CEZZ | | Ground-Part | |
| | MSPRT0001PEFJ | R | Spring | AC |
| | PMAGF3041CEZZ | R | Magnet | AG |
| | LHLDW0003PEKZ | R | Holder | AB |
| | LHLDW1075PEKZ | R | Holder | AC |
| | PSPAG0004KJZZ | R | Spacer | AB |
| **PRINTED WIRING BOARD ASSEMBLIES** *(NOT REPLACEMENT ITEM)* | | | | |
| PWB-A | DUNTK9988WET2 | - | Main Unit | — |
| PWB-B | DUNTK9990WET1 | - | CRT Unit | — |
| **PWB-A DUNTK9988WET2 MAIN UNIT** | | | | |
| **TUNER** | | | | |
| | ***NOTE: THE PARTS HERES SHOWN ARE SUPPLIED AS AN ASSEMBLY NOT INDEPENDENTLY.*** | | | |
| ⚠ TU201 | VTUVTST5HD84/ | R | Tuner | BB |
| **INTEGRATED CIRCUITS** | | | | |
| IC301 | VHiTDA7056A-1 | R | TDA7056A | AP |
| IC501 | VHiTDA8357/-1 | R | TDA8357 | AN |
| IC605 | VHiKA7808Pi-1 | R | KA7808PI | AF |
| IC701 | VHiSTRF6654-1 | R | STRF6654 | AX |
| IC751 | VHiTA48M033-1 | R | TA48M033 | AH |
| IC753 | VHiSE115N//-1 | R | SE115N | AF |
| IC801 | RH-iX3368CEN1 | R | IX3368CE | BE |
| IC1002 | VHiPST573J/-1 | R | PST573J | AE |
| IC1003 | VHiM24C04W/-1 | R | M24C04W | AG |
| IC1005 | VHiKA7805Pi-1 | R | KA7805PI | AE |
| **TRANSISTORS** | | | | |
| Q201 | VS2SC2735//1E | R | 2SC2735 | AC |
| Q203 | VS2SD601AR/-1 | R | 2SD601AR | AC |
| Q205 | VS2SC1815GW-1 | R | 2SC1815GW | AB |
| Q301 | VS2SD601AR/-1 | R | 2SD601AR | AC |
| Q302 | VS2SD601AR/-1 | R | 2SD601AR | AC |
| Q305 | VS2SD601AR/-1 | R | 2SD601AR | AC |
| Q601 | VS2SC2482//-1 | R | 2SC2482 | AD |
| Q602 | VS2SD2586//1E | R | 2SD2586 | AM |
| Q603 | VS2SD601AR/-1 | R | 2SD601AR | AC |
| Q801 | VS2SB709AR/-1 | R | 2SB709AR | AC |
| Q802 | VS2SB709AR/-1 | R | 2SB709AR | AC |
| Q1003 | VS2SD601AR/-1 | R | 2SD601AR | AC |
| Q1010 | VS2SD601AR/-1 | R | 2SD601AR | AC |
| **DIODES AND LED'S** | | | | |
| D201 | RH-EX0676GEZZ | R | Zener Diode | AA |
| D301 | VHD1SS119//-1 | R | 1SS119 | AB |
| D305 | RH-EX0631GEZZ | R | Zener Diode | AA |
| D310 | RH-DX0302CEZZ | R | DX0302CE | AC |
| D402 | RH-EX0631GEZZ | R | Zener Diode | AA |
| D501 | RH-EX0640GEZZ | R | Zener Diode | AA |
| D502 | VHD1SS119//-1 | R | 1SS119 | AB |
| D503 | VHD1SS119//-1 | R | 1SS119 | AB |
| D504 | VHD1SS119//-1 | R | 1SS119 | AB |
| D505 | RH-DX0127CEZZ | R | DX0127CE | AC |
| D507 | VHD1SS119//-1 | R | 1SS119 | AB |
| D508 | RH-EX0647GEZZ | R | Zener Diode | AA |
| D509 | RH-EX0647GEZZ | R | Zener Diode | AA |
| D510 | RH-EX0867CEZZ | R | Zener Diode | AC |
| D511 | RH-EX0867CEZZ | R | Zener Diode | AC |
| D512 | VHD1SS119//-1 | R | 1SS119 | AB |
| D513 | VHD1SS119//-1 | R | 1SS119 | AB |
| D514 | RH-EX0903CEZZ | R | Zener Diode | AC |
| D515 | RH-EX0903CEZZ | R | Zener Diode | AC |
| D602 | VHD1SS119//-1 | R | 1SS119 | AB |
| D603 | RH-DX0062CEZZ | R | DX0062CE | AD |
| D604 | VHD1SS119//-1 | R | 1SS119 | AB |
| D605 | RH-EX0840CEZZ | R | Zener Diode | AC |
| D606 | VHD1SS119//-1 | R | 1SS119 | AB |
| D607 | RH-EX0658GEZZ | R | Zener Diode | AA |
| D608 | RH-EX0604GEZZ | R | Zener Diode | AB |
| D609 | VHD1SS119//-1 | R | 1SS119 | AB |
| D611 | RH-DX0302CEZZ | R | DX0302CE | AC |
| D612 | RH-EX0627GEZZ | R | Zener Diode | AA |
| D613 | VHD1SS119//-1 | R | 1SS119 | AB |
| D614 | VHD1SS119//-1 | R | 1SS119 | AB |
| ⚠ D701 | RH-DX0386CEZZ | R | DX0386CE | AG |
| D702 | VHD1SS82///1A | R | 1SS82 | AC |
| D705 | RH-DX0492CEZZ | R | DX0492CE | AE |
| D706 | VHD1SS82///1A | R | 1SS82 | AC |
| D707 | VHD1SS82///1A | R | 1SS82 | AC |
| D708 | RH-DX0400CEZZ | R | DX0400CE | AC |
| D709 | RH-DX0164CEZZ | R | DX0400CE | AC |
| D710 | RH-EX0601GEZZ | R | Zener Diode | AA |
| D711 | VHD1SS82///1A | R | 1SS82 | AC |
| D712 | VHD1SS82///1A | R | 1SS82 | AC |
| D713 | RH-EX0621GEZZ | R | Zener Diode | AB |
| D714 | RH-DX0055TAZZ | R | DX0055TA | AD |
| D715 | RH-DX0055TAZZ | R | DX0055TA | AD |
| D718 | RH-EX0649GEZZ | R | Zener Diode | AB |
| D751 | RH-DX0471CEZZ | R | DX0471CE | AE |
| D752 | VHD1SS119//-1 | R | 1SS119 | AB |
| D753 | RH-DX0471CEZZ | R | DX0471CE | AE |
| D758 | RH-DX0461CEZZ | R | DX0461CE | AG |
| D801 | VHD1SS119//-1 | R | 1SS119 | AB |
| D802 | VHD1SS119//-1 | R | 1SS119 | AB |
| D803 | VHD1SS119//-1 | R | 1SS119 | AB |
| D804 | VHD1SS119//-1 | R | 1SS119 | AB |
| D805 | VHD1SS119//-1 | R | 1SS119 | AB |
| D806 | VHD1SS119//-1 | R | 1SS119 | AB |
| D1001 | RH-PX0423CEZZ | R | LED | AD |
| D1004 | VHD1SS119//-1 | R | 1SS119 | AB |
| D1007 | RH-EX0867CEZZ | R | Zener Diode | AC |
| D1008 | RH-EX0867CEZZ | R | Zener Diode | AC |
| D1009 | RH-EX0867CEZZ | R | Zener Diode | AC |
| D1010 | RH-EX0867CEZZ | R | Zener Diode | AC |
| ⚠ IC702 | RH-FX0008GEZZ | R | PC123FY8 | AE |
| ⚠ VA700 | RH-VX0047CEZZ | R | Varistor | AF |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| | **PACKAGED CIRCUIT** | | | |
| PR701 | RMPTP0001PEZZ | R | Packaged Circuit | AN |
| | **CRYSTAL** | | | |
| X1001 | RCRSB0281CEZZ | R | Crystal, CRSB0281CE | AG |
| | **FILTERS** | | | |
| CF202 | RFiLC0335CEZZ | | Filter, FiLC0335CE | |
| SF201 | RFiLC0442CEZZ | R | Filter, FiLC0442CE | AL |
| | **COILS** | | | |
| L202 | VP-DF270K0000 | R | Peaking, 27µH | AB |
| L203 | VP-DF270K0000 | R | Peaking, 27µH | AB |
| L204 | VP-XF1R2K0000 | R | Peaking, 1.2µH | AB |
| L205 | VP-DF1R0K0000 | R | Peaking, 1µH | AB |
| L207 | VP-DF1R0K0000 | R | Peaking, 1µH | AB |
| L209 | VP-XF100K0000 | R | Peaking, 10µH | AB |
| L601 | VP-CF1R0M0000 | R | Peaking, 1µH | AB |
| L603 | RCiLP0225CEZZ | R | Coil, CiLP0225CE | AF |
| ⚠ L702 | RCiLF0019PEZZ | R | Coil, CiLF0019PE | AN |
| L802 | VP-DF100K0000 | R | Peaking, 10µH | AB |
| L803 | VP-DF100K0000 | R | Peaking, 10µH | AB |
| L1030 | VP-DF100K0000 | R | Peaking, 10µH | AB |
| L1050 | VP-DF100K0000 | R | Peaking, 10µH | AB |
| L1051 | VP-DF100K0000 | R | Peaking, 10µH | AB |
| | **TRANSFORMERS** | | | |
| ⚠ T601 | RTRNZ0026PEZZ | R | Transformer | AH |
| ⚠ T602 | RTRNF0188PEZZ | | H-Volt Transformer | |
| ⚠ T701 | RTRNZ0141PEZZ | R | Transformer | AR |
| | **CAPACITORS** | | | |
| C200 | VCEA0A1CW476M | R | 47 16V Electrolytic | AB |
| C203 | VCKYCY1HF103Z | R | 0.01 50V Ceramic | AA |
| C204 | VCEA0A1CW107M | R | 100 16V Electrolytic | AC |
| C205 | VCKYCY1HF103Z | R | 0.01 50V Ceramic | AA |
| C206 | VCEA0A1HW106M | R | 10 50V Electrolytic | AB |
| C207 | VCKYCY1HF103Z | R | 0.01 50V Ceramic | AA |
| C208 | VCKYCY1HF103Z | R | 0.01 50V Ceramic | AA |
| C209 | VCKYCY1HF103Z | R | 0.01 50V Ceramic | AA |
| C210 | VCKYCY1HF103Z | R | 0.01 50V Ceramic | AA |
| C211 | VCKYCY1EF104Z | R | 0.1 25V Ceramic | AA |
| C212 | VCEA0A1CW106M | R | 10 16V Electrolytic | AB |
| C213 | VCKYCY1HF223Z | R | 0.022 50V Ceramic | AB |
| C215 | VCEA0A1CW476M | R | 47 16V Electrolytic | AB |
| C216 | VCKYCY1HB821K | R | 820p 50V Ceramic | AA |
| C217 | VCKYCY1HB472K | R | 4700p 50V Ceramic | AA |
| C302 | VCEA0A1HW225M | R | 2.2 50V Electrolytic | AB |
| C303 | VCEA0A1CW106M | R | 10 16V Electrolytic | AB |
| C304 | VCQYTA1HM473J | R | 0.047 50V Mylar | AA |
| C305 | VCQYTA1HM473J | R | 0.047 50V Mylar | AA |
| C312 | VCQYTA1HM123J | R | 0.012 50V Mylar | AA |
| C314 | VCEA0A1EW477M | R | 470 25V Electrolytic | AD |
| C315 | VCKYPA1HF103Z | R | 0.01 50V Ceramic | AA |
| C317 | VCEA0A1HW224M | R | 0.22 50V Electrolytic | AB |
| C318 | VCKYCY1HB102K | R | 1000p 50V Ceramic | AA |
| C331 | VCEA0A1HW105M | R | 1 50V Electrolytic | AB |
| C332 | VCEA0A1EW477M | R | 470 25V Electrolytic | AD |
| C333 | VCKYPA2HB102K | R | 1000p 500V Ceramic | AA |
| C356 | VCKYCY1HB682K | R | 6800p 50V Ceramic | AA |
| C359 | VCEA9M1CW106M | R | 10 16V Electrolytic | AB |
| C364 | VCEA0A1CW106M | R | 10 16V Electrolytic | AB |
| C371 | VCEA0A1CW476M | R | 47 16V Electrolytic | AB |
| C390 | VCEA0A1HW105M | R | 1 50V Electrolytic | AB |
| C406 | VCEA0A1CW477M | R | 470 16V Electrolytic | AC |
| C408 | VCEA0A1CW106M | R | 10 16V Electrolytic | AB |
| C409 | VCKYCY1EF104Z | R | 0.1 25V Ceramic | AA |
| C410 | VCKYCY1EF104Z | R | 0.1 25V Ceramic | AA |
| C411 | VCKYCY1HB102K | R | 1000p 50V Ceramic | AA |
| C469 | VCEA0A1HW105M | R | 1 50V Electrolytic | AB |
| C501 | VCKYCY1HF103Z | R | 0.01 50V Ceramic | AA |
| C502 | VCKYCY1HF103Z | R | 0.01 50V Ceramic | AA |
| C503 | VCEA0A1EW108M | R | 1000 25V Electrolytic | AD |
| C504 | VCKYCY1HF223Z | R | 0.022 50V Ceramic | AB |
| C506 | VCQYTA1HM104J | R | 0.1 50V Mylar | AA |
| C507 | VCEA0A1JW107M | R | 100 63V Electrolytic | AC |
| C508 | VCQYTA1HM103J | R | 0.01 50V Mylar | AA |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| C512 | VCKYCY1HB102K | R | 1000p 50V Ceramic | AA |
| C513 | VCKYCY1HB102K | R | 1000p 50V Ceramic | AA |
| C514 | VCKYPA1HF103Z | R | 0.01 50V Ceramic | AA |
| C515 | VCKYPA2HB102K | R | 1000p 500V Ceramic | AA |
| C516 | VCEA0A1JW477M | R | 470 63V Electrolytic | AE |
| C517 | VCFYFA1HA104J | R | 0.1 50V Metallzed Polypro Film | AA |
| C601 | VCEAGA2EW106M | R | 10 250V Electrolytic | AC |
| C602 | VCQYTA1HM104J | R | 0.1 50V Mylar | AA |
| C603 | VCEA0A1HW105M | R | 1 50V Electrolytic | AB |
| C604 | VCEA0A1HW105M | R | 1 50V Electrolytic | AB |
| C605 | VCKYPA1HF103Z | R | 0.01 50V Ceramic | AA |
| C606 | VCKYCY1HF103Z | R | 0.01 50V Ceramic | AA |
| C607 | VCEA0A1CW477M | R | 470 16V Electrolytic | AC |
| C608 | VCEA0A1EW476M | R | 47 25V Electrolytic | AB |
| C609 | VCEA0A1EW108M | R | 1000 25V Electrolytic | AD |
| C610 | VCFYSB2EB823J | R | 0.082 250V Metallzed Polypro Film | AD |
| C611 | VCKYPA2HB102K | R | 1000p 500V Ceramic | AA |
| C612 | RC-EZ0724CEZZ | R | 100 160V Electrolytic | AG |
| C613 | VCFPPD2DB684J | R | 0.68 200V Metallzed Polypro Film | AE |
| C614 | RC-KZ0039CEZZ | R | 680p 2kV Ceramic | AB |
| C615 | VCFPPB2EB224J | R | 0.22 250V Metallzed Polypro Film | AD |
| C616 | VCFPPD3CA752H | R | 7500p 1600V Metallzed Polypro Film | AF |
| C617 | VCKYPA2HB102K | R | 1000p 500V Ceramic | AA |
| C620 | VCKYCY1EF104Z | R | 0.1 25V Ceramic | AA |
| C623 | VCQYTA1HM222J | R | 2200p 50V Mylar | AA |
| C624 | VCQYTA1HM472J | R | 4700p 50V Mylar | AB |
| C625 | VCEA0A1HW105M | R | 1 50V Electrolytic | AB |
| C626 | VCKYCY1HF223Z | R | 0.022 50V Ceramic | AB |
| C627 | VCEA0A1HW106M | R | 10 50V Electrolytic | AB |
| C628 | VCEA0A1HW474M | R | 0.47 50V Electrolytic | AB |
| C650 | VCKYCY1EF104Z | R | 0.1 25V Ceramic | AA |
| C654 | VCEA0A1CW476M | R | 47 16V Electrolytic | AB |
| C700 | VCQYTA2AA103K | R | 0.01 100V Mylar | AC |
| ⚠ C701 | RC-FZ008SGEZZ | R | 0.1 AC250V Metallzed Polypro Film | AD |
| C702 | RC-KZ0160GEZZ | R | 0.01 250V Ceramic | AC |
| C703 | RC-KZ0160GEZZ | R | 0.01 250V Ceramic | AC |
| C704 | VCKYPA2HB102K | R | 1000p 500V Ceramic | AA |
| C705 | VCKYPA2HB102K | R | 1000p 500V Ceramic | AA |
| C707 | RC-EZ0804CEZZ | R | 200 400V Electrolytic | AU |
| C708 | RC-KZ0160GEZZ | R | 0.01 250V Ceramic | AC |
| C709 | VCQYTA1HM471J | R | 470p 50V Mylar | AB |
| C711 | RC-KZ0039CEZZ | R | 680p 2kV Ceramic | AB |
| C712 | VCQYTA1HM102J | R | 1000p 50V Mylar | AA |
| C713 | RC-KZ007JCEZZ | R | 0.01 250V Ceramic | AC |
| C714 | VCKYPH3DB561K | R | 560p 2000V Ceramic | AC |
| C715 | VCKYPA2HB102K | R | 1000p 500V Ceramic | AA |
| C717 | VCQYTA1HM182J | R | 1800p 50V Mylar | AA |
| C718 | VCEAGA2AW475M | R | 4.7 100V Electrolytic | AB |
| C719 | VCEA9M1HW226M | R | 22 50V Electrolytic | AB |
| ⚠ C721 | RC-KZ0102GEZZ | R | 680p 4kV Ceramic | AE |
| C751 | VCEA0A1CW476M | R | 47 16V Electrolytic | AB |
| C752 | VCEA0A0JW107M | R | 100 6.3V Electrolytic | AB |
| C753 | VCKYPA2HB102K | R | 1000p 500V Ceramic | AA |
| C755 | VCEA0A1CW108M | R | 1000 16V Electrolytic | AD |
| ⚠ C759 | VCKYPA1HB102K | R | 1000p 50V Ceramic | AA |
| C760 | RC-KZ0039CEZZ | R | 680p 2kV Ceramic | AB |
| C761 | VCEA4W2CN227M | R | 220 160V Electrolytic | AG |
| C762 | VCQYTA1HM473J | R | 0.047 50V Mylar | AA |
| C801 | VCEA0A1HW105M | R | 1 50V Electrolytic | AB |
| C802 | VCEA0A1CW337M | R | 330 16V Electrolytic | AC |
| C803 | VCEA9M1CW107M | R | 100 16V Electrolytic | AB |
| C804 | VCKYCY1HB222K | R | 2200p 50V Ceramic | AA |
| C805 | VCKYCY1HB102K | R | 1000p 50V Ceramic | AA |
| C806 | VCKYCY1HB102K | R | 1000p 50V Ceramic | AA |
| C807 | VCKYCY1HB102K | R | 1000p 50V Ceramic | AA |
| C808 | VCEA0A1CW107M | R | 100 16V Electrolytic | AC |
| C809 | VCKYCY1HF223Z | R | 0.022 50V Ceramic | AB |
| C810 | VCKYCY1EF104Z | R | 0.1 25V Ceramic | AA |
| C811 | VCEA0A1CW107M | R | 100 16V Electrolytic | AC |
| C812 | VCFYFA1HA224J | R | 0.22 50V Metallzed Polypro Film | AB |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| C813 | VCFYFA1HA224J | R | 0.22 50V Metallzed Polypro Film | AB |
| C814 | VCKYCY1HB471K | R | 470p 50V Ceramic | AA |
| C1001 | VCEA0A0JW107M | R | 100 6.3V Electrolytic | AB |
| C1003 | VCEA0A1CW106M | R | 10 16V Electrolytic | AB |
| C1004 | VCKYCY1EF104Z | R | 0.1 25V Ceramic | AA |
| C1005 | VCKYCY1HF223Z | R | 0.022 50V Ceramic | AB |
| C1006 | VCEA0A1CW106M | R | 10 16V Electrolytic | AB |
| C1007 | VCEA0A1CW106M | R | 10 16V Electrolytic | AB |
| C1008 | VCCCCY1HH330J | R | 33p 50V Ceramic | AA |
| C1009 | VCCCCY1HH330J | R | 33p 50V Ceramic | AA |
| C1010 | VCEA0A0JW107M | R | 100 6.3V Electrolytic | AB |
| C1011 | VCKYCY1HF223Z | R | 0.022 50V Ceramic | AB |
| C1012 | VCKYCY1HF223Z | R | 0.022 50V Ceramic | AB |
| C1013 | VCEA0A0JW107M | R | 100 6.3V Electrolytic | AB |
| C1014 | VCEA0A1CW106M | R | 10 16V Electrolytic | AB |
| C1015 | VCFYFA1HA474J | R | 0.47 50V Metallzed Polypro Film | AC |
| C1016 | VCQYTA1HM104J | R | 0.1 50V Mylar | AA |
| C1018 | VCKYCY1HB221K | R | 220p 50V Ceramic | AA |
| C1019 | VCEA9M1HW225M | R | 2.2 50V Electrolytic | AB |

## RESISTORS

| | | | | | | |
|---|---|---|---|---|---|---|
| JA1033 | VRD-RA2BE102J | R | 1k | 1/8W | Carbon | AA |
| RJ2 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ11 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ13 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ14 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ15 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ16 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ21 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ25 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ26 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ27 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ28 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ29 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ30 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ31 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ32 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ33 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ34 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ40 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ41 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ50 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ51 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ53 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ55 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ61 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ64 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ66 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ67 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ68 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ69 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ71 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ74 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ75 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ76 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ78 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ79 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ80 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ84 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ85 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ87 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ88 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ89 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ94 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ95 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ96 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ103 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ201 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ202 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ205 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ206 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| RJ207 | VRS-CY1JF000J | R | 0 | 1/16W | Metal Oxide | AA |
| R201 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R202 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R203 | VRD-RM2HD102J | R | 1k | 1/2W | Carbon | AA |
| R204 | VRD-RM2HD102J | R | 1k | 1/2W | Carbon | AA |
| R205 | VRD-RA2BE680J | R | 68 | 1/8W | Carbon | AA |
| R206 | VRS-CY1JF122J | R | 1.2k | 1/16W | Metal Oxide | AA |
| R207 | VRS-CY1JF221J | R | 220 | 1/16W | Metal Oxide | AA |
| R208 | VRS-CY1JF122J | R | 1.2k | 1/16W | Metal Oxide | AA |
| R209 | VRS-CY1JF392J | R | 3.9k | 1/16W | Metal Oxide | AA |
| R217 | VRD-RA2BE392J | R | 3.9k | 1/8W | Carbon | AA |
| R218 | VRS-CY1JF102J | R | 1k | 1/16W | Metal Oxide | AA |
| R219 | VRS-CY1JF391J | R | 390 | 1/16W | Metal Oxide | AA |
| R220 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R221 | VRS-CY1JF102J | R | 1k | 1/16W | Metal Oxide | AA |
| R222 | VRS-CY1JF681J | R | 680 | 1/16W | Metal Oxide | AA |
| R226 | VRS-CY1JF750J | R | 75 | 1/16W | Metal Oxide | AA |
| R227 | VRD-RM2HD330J | R | 33 | 1/2W | Carbon | AA |
| R228 | VRD-RM2HD330J | R | 33 | 1/2W | Carbon | AA |
| R230 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R231 | VRS-CY1JF472J | R | 4.7k | 1/16W | Metal Oxide | AA |
| R233 | VRS-CY1JF181J | R | 180 | 1/16W | Metal Oxide | AA |
| R237 | VRS-CY1JF272J | R | 2.7k | 1/16W | Metal Oxide | AA |
| R238 | VRS-CY1JF821J | R | 820 | 1/16W | Metal Oxide | AA |
| R239 | VRS-CY1JF221J | R | 220 | 1/16W | Metal Oxide | AA |
| R302 | VRS-CY1JF473J | R | 47k | 1/16W | Metal Oxide | AA |
| R303 | VRS-CY1JF473J | R | 47k | 1/16W | Metal Oxide | AA |
| R304 | VRS-CY1JF392J | R | 3.9k | 1/16W | Metal Oxide | AA |
| R305 | VRS-CY1JF100J | R | 10 | 1/16W | Metal Oxide | AA |
| R307 | VRD-RA2BE182J | R | 1.8k | 1/8W | Carbon | AA |
| R308 | VRD-RA2BE472J | R | 4.7k | 1/8W | Carbon | AA |
| R320 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R321 | VRS-CY1JF561J | R | 560 | 1/16W | Metal Oxide | AA |
| R328 | VRS-CY1JF564J | R | 560k | 1/16W | Metal Oxide | AA |
| R329 | VRS-CY1JF332J | R | 3.3k | 1/16W | Metal Oxide | AA |
| R330 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R331 | VRS-CY1JF102J | R | 1k | 1/16W | Metal Oxide | AA |
| R332 | VRS-CY1JF561J | R | 560 | 1/16W | Metal Oxide | AA |
| R333 | VRS-CY1JF103J | R | 10k | 1/16W | Metal Oxide | AA |
| R334 | VRS-CY1JF102J | R | 1k | 1/16W | Metal Oxide | AA |
| R343 | VRS-CY1JF104J | R | 100k | 1/16W | Metal Oxide | AA |
| R344 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R357 | VRS-CY1JF100J | R | 10 | 1/16W | Metal Oxide | AA |
| R378 | VRN-VV3DBR68J | R | 0.68 | 2W | Metal Film | AA |
| R406 | VRS-CY1JF103J | R | 10k | 1/16W | Metal Oxide | AA |
| R411 | VRD-RA2BE820J | R | 82 | 1/8W | Carbon | AA |
| R412 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R501 | VRS-CY1JF182J | R | 1.8k | 1/16W | Metal Oxide | AA |
| R502 | VRS-CY1JF182J | R | 1.8k | 1/16W | Metal Oxide | AA |
| R503 | VRD-RM2HD1R5J | R | 1.5 | 1/2W | Carbon | AA |
| R505 | VRD-RM2HD330J | R | 33 | 1/2W | Carbon | AA |
| R506 | VRD-RA2BE224J | R | 220k | 1/8W | Carbon | AA |
| R508 | VRD-RM2HD221J | R | 220 | 1/2W | Carbon | AA |
| R509 | VRD-RM2HD1R0J | R | 1 | 1/2W | Carbon | AA |
| R510 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R511 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R513 | VRD-RA2BE393J | R | 39k | 1/8W | Carbon | AA |
| R514 | VRS-CY1JF101J | R | 100 | 1/16W | Metal Oxide | AA |
| R515 | VRS-CY1JF272J | R | 2.7k | 1/16W | Metal Oxide | AA |
| R602 | VRN-VV3DB1R5J | R | 1.5 | 2W | Metal Film | AB |
| R603 | VRD-RM2HD102J | R | 1k | 1/2W | Carbon | AA |
| R604 | VRD-RA2BE393J | R | 39k | 1/8W | Carbon | AA |
| R605 | VRD-RM2HD101J | R | 100 | 1/2W | Carbon | AA |
| R606 | VRD-RA2BE333J | R | 33k | 1/8W | Carbon | AA |
| R607 | VRS-CY1JF102J | R | 1k | 1/16W | Metal Oxide | AA |
| R608 | VRS-CY1JF123J | R | 12k | 1/16W | Metal Oxide | AA |
| R609 | VRD-RA2BE223G | R | 22k | 1/8W | Carbon | AA |
| R610 | VRD-RA2BE822J | R | 8.2k | 1/8W | Carbon | AA |
| R611 | VRD-RA2EE563G | R | 56k | 1/4W | Carbon | AA |
| R612 | VRD-RA2BE103J | R | 10k | 1/8W | Carbon | AA |
| R613 | VRD-RA2BE103J | R | 10k | 1/8W | Carbon | AA |
| R614 | VRS-CY1JF103J | R | 10k | 1/16W | Metal Oxide | AA |
| R615 | VRS-KT3LB332J | R | 3.3k | 3W | Metal Oxide | AC |
| R616 | VRS-CY1JF102J | R | 1k | 1/16W | Metal Oxide | AA |
| R617 | VRD-RM2HD472J | R | 4.7k | 1/2W | Carbon | AA |
| R618 | VRS-KA3HG3R3K | R | 3.3 | 5W | Metal Oxide | AD |
| R619 | VRD-RM2HD682J | R | 6.8k | 1/2W | Carbon | AA |
| R622 | VRS-VV3DB331J | R | 330 | 2W | Metal Oxide | AA |
| R623 | VRS-VV3DB150J | R | 15 | 2W | Metal Oxide | AA |
| R624 | VRD-RA2BE101J | R | 100 | 1/8W | Carbon | AB |
| R625 | VRS-CY1JF184J | R | 180k | 1/16W | Metal Oxide | AA |
| R626 | VRS-CY1JF472J | R | 4.7k | 1/16W | Metal Oxide | AA |
| R628 | VRD-RM2HD470J | R | 47 | 1/2W | Carbon | AA |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| R630 | VRS-CY1JF100J | R | 10 1/16W Metal Oxide | AA |
| R631 | VRS-CY1JF391J | R | 390 1/16W Metal Oxide | AA |
| R632 | VRS-CY1JF273J | R | 27k 1/16W Metal Oxide | AA |
| R633 | VRS-CY1JF102J | R | 1k 1/16W Metal Oxide | AA |
| R635 | VRS-CY1JF822J | R | 8.2k 1/16W Metal Oxide | AA |
| R636 | VRS-CY1JF223J | R | 22k 1/16W Metal Oxide | AA |
| R638 | VRS-CY1JF103J | R | 10k 1/16W Metal Oxide | AA |
| R639 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R701 | VRW-KQ4AC3R3K | R | 3.3 10W Cement | AE |
| R703 | VRS-KT3LB473J | R | 47k 3W Metal Oxide | AE |
| ⚠ R704 | VRG-PD2HD150J | R | 15 1/2W Fuse Reisistor | AC |
| R705 | VRD-RA2BE122J | R | 1.2k 1/8W Carbon | AA |
| R706 | VRD-RM2HD152J | R | 1.5k 1/2W Carbon | AA |
| R707 | VRS-KT3LB473J | R | 47k 3W Metal Oxide | AE |
| R708 | VRD-RM2HD272J | R | 2.7k 1/2W Carbon | AA |
| R709 | VRD-RA2BE681J | R | 680 1/8W Carbon | AA |
| R710 | VRN-VV3ABR39J | R | 0.39 1W Metal Film | AA |
| R711 | VRN-VV3ABR33J | R | 0.33 1W Metal Film | AA |
| ⚠ R712 | VRG-PD2HD150J | R | 15 1/2W Fuse Reisistor | AC |
| R717 | VRD-RM2HD124J | R | 120k 1/2W Carbon | AA |
| R718 | VRD-RM2HD124J | R | 120k 1/2W Carbon | AA |
| ⚠ R719 | VRC-UA2HG825K | R | 8.2M 1/2W Solid | AA |
| R721 | VRD-RA2BE393J | R | 39k 1/8W Carbon | AA |
| R722 | VRD-RM2HD124J | R | 120k 1/2W Carbon | AA |
| R723 | VRD-RA2BE684J | R | 680k 1/8W Carbon | AA |
| ⚠ R726 | VRC-UA2HG825K | R | 8.2M 1/2W Solid | AA |
| R750 | VRD-RM2HD4R7J | R | 4.7 1/2W Carbon | AA |
| R758 | VRD-RA2BE102J | R | 1k 1/8W Carbon | AA |
| R760 | VRD-RA2BE471J | R | 470 1/8W Carbon | AA |
| R801 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |
| R802 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |
| R803 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |
| R804 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |
| R805 | VRS-CY1JF822J | R | 8.2k 1/16W Metal Oxide | AA |
| R806 | VRD-RA2BE123J | R | 12k 1/8W Carbon | AA |
| R807 | VRS-CY1JF103J | R | 10k 1/16W Metal Oxide | AA |
| R808 | VRS-CY1JF221J | R | 220 1/16W Metal Oxide | AA |
| R809 | VRD-RA2BE224J | R | 220k 1/8W Carbon | AA |
| R811 | VRS-CY1JF563J | R | 56k 1/16W Metal Oxide | AA |
| R812 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |
| R813 | VRS-CY1JF221J | R | 220 1/16W Metal Oxide | AA |
| R1001 | VRD-RA2BE221J | R | 220 1/8W Carbon | AA |
| R1002 | VRS-CY1JF331J | R | 330 1/16W Metal Oxide | AA |
| R1003 | VRS-CY1JF471J | R | 470 1/16W Metal Oxide | AA |
| R1004 | VRS-CY1JF821J | R | 820 1/16W Metal Oxide | AA |
| R1005 | VRD-RA2BE181J | R | 180 1/8W Carbon | AA |
| R1011 | VRS-CY1JF820J | R | 82 1/16W Metal Oxide | AA |
| R1012 | VRS-CY1JF391J | R | 390 1/16W Metal Oxide | AA |
| R1014 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1015 | VRS-CY1JF332J | R | 3.3k 1/16W Metal Oxide | AA |
| R1016 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1017 | VRS-CY1JF332J | R | 3.3k 1/16W Metal Oxide | AA |
| R1019 | VRS-CY1JF472J | R | 4.7k 1/16W Metal Oxide | AA |
| R1020 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1021 | VRS-CY1JF153J | R | 15k 1/16W Metal Oxide | AA |
| R1022 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1023 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |
| R1024 | VRS-CY1JF122J | R | 1.2k 1/16W Metal Oxide | AA |
| R1025 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |
| R1026 | VRS-CY1JF224J | R | 220k 1/16W Metal Oxide | AA |
| R1027 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1028 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1030 | VRS-CY1JF102J | R | 1k 1/16W Metal Oxide | AA |
| R1031 | VRD-RA2BE562J | R | 5.6k 1/8W Carbon | AA |
| R1032 | VRS-CY1JF332J | R | 3.3k 1/16W Metal Oxide | AA |
| R1034 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1035 | VRS-CY1JF332J | R | 3.3k 1/16W Metal Oxide | AA |
| R1036 | VRS-CY1JF332J | R | 3.3k 1/16W Metal Oxide | AA |
| R1037 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1038 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1039 | VRS-CY1JF223J | R | 22k 1/16W Metal Oxide | AA |
| R1040 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |
| R1041 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |
| R1043 | VRS-CY1JF153J | R | 15k 1/16W Metal Oxide | AA |
| R1044 | VRS-CY1JF153J | R | 15k 1/16W Metal Oxide | AA |
| R1045 | VRD-RA2BE271J | R | 270 1/8W Carbon | AA |
| R1046 | VRD-RA2BE101J | R | 100 1/8W Carbon | AB |
| R1065 | VRS-CY1JF101J | R | 100 1/16W Metal Oxide | AA |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| **BALUNES** | | | | |
| FB306 | RBLN-0037CEZZ | R | Balun, BLN-0037CE | AB |
| FB501 | RBLN-0037CEZZ | R | Balun, BLN-0037CE | AB |
| FB502 | RBLN-0037CEZZ | R | Balun, BLN-0037CE | AB |
| FB602 | RBLN-0037CEZZ | R | Balun, BLN-0037CE | AB |
| FB701 | RBLN-0037CEZZ | R | Balun, BLN-0037CE | AB |
| FB702 | RBLN-0037CEZZ | R | Balun, BLN-0037CE | AB |
| FB751 | RBLN-0037CEZZ | R | Balun, BLN-0037CE | AB |
| FB752 | RBLN-0037CEZZ | R | Balun, BLN-0037CE | AB |
| **SWITCHES** | | | | |
| ⚠ S701 | QSW-P0591CEZZ | R | Switch | AQ |
| S1001 | QSW-K0079GEZZ | R | Switch, CH Up | AB |
| S1002 | QSW-K0079GEZZ | R | Switch, CH Down | AB |
| S1003 | QSW-K0079GEZZ | R | Switch, Vol Up | AB |
| S1004 | QSW-K0079GEZZ | R | Switch, Vol Down | AB |
| S1005 | QSW-K0079GEZZ | R | Switch, Menu | AB |
| **MISCELLANEOUS PARTS** | | | | |
| ⚠ ACC701 | QACCZ3008PEZZ | R | AC Cord | AN |
| ⚠ FH701 | QFSHD1014CEZZ | R | Fuse Holder | AC |
| ⚠ FH702 | QFSHD1013CEZZ | R | Fuse Holder | AC |
| ⚠ F701 | QFS-C3229CEZZ | R | Fuse, T3.15A 250V | AD |
| J405 | QJAKH0011AJZZ | R | Jack | AK |
| P302 | QPLGN0241CEZZ | R | Plug, 2 Pin | AA |
| P502 | QPLGN0603CEZZ | R | Plug, 6 Pin | AB |
| P602 | QPLGN0641CEZZ | R | Plug, 6 Pin | AB |
| P701 | QPLGN0207CEZZ | R | Plug, 2 Pin | AA |
| P712 | QPLGN0269GEZZ | R | Plug, 2 Pin | AB |
| P1001 | QPLGN0541CEZZ | R | Plug, 5 Pin | AB |
| P1002 | QPLGN0541CEZZ | R | Plug, 5 Pin | AB |
| RDA300 | PRDAR0142PEFW | R | Heat Sink, IC301 | AD |
| RDA501 | PRDAR0298PEFW | R | Heat Sink, IC501 | AF |
| RDA601 | PRDAR0224PEFW | R | Heat Sink, Q602 | AF |
| RDA700 | PRDAR0260PEFW | R | Heat Sink, IC701 | AH |
| RMC1001 | RRMCU0235CEZZ | R | Remote Receiver | AK |
| SP301 | RSP-Z0005KJZZ | | Speaker | |
| TP201 | QLUGP0102PEZZ | R | Lug | AA |
| | LHLDP1066PE00 | R | Holder | AC |
| | QCNW-2378PEZZ | R | Connecting Cord | AE |
| | QCNW-2405PEZZ | R | Connecting Cord | AE |
| | QCNW-2433PEN1 | R | Connecting Cord | AF |

## PWB-B DUNTK9990WET1 CRT UNIT

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| **TRANSISTORS** | | | | |
| Q870 | VSBF422////-1 | R | BF422 | AC |
| Q871 | VSBF422////-1 | R | BF422 | AC |
| Q872 | VSBF422////-1 | R | BF422 | AC |
| Q883 | VSBF421////-1 | R | BF421 | AC |
| Q885 | VSBF421////-1 | R | BF421 | AC |
| Q887 | VSBF421////-1 | R | BF421 | AC |
| **DIODES** | | | | |
| D811 | VHD1SS119//-1 | R | 1SS119 | AB |
| D812 | VHD1SS119//-1 | R | 1SS119 | AB |
| D880 | VHD1SS119//-1 | R | 1SS119 | AB |
| D881 | VHD1SS119//-1 | R | 1SS119 | AB |
| D882 | VHD1SS119//-1 | R | 1SS119 | AB |
| D883 | VHD1SS82///1A | R | 1SS82 | AC |
| D884 | VHD1SS82///1A | R | 1SS82 | AC |
| D885 | VHD1SS82///1A | R | 1SS82 | AC |
| D886 | VHD1SS82///1A | R | 1SS82 | AC |
| D887 | VHD1SS82///1A | R | 1SS82 | AC |
| D888 | VHD1SS82///1A | R | 1SS82 | AC |
| D890 | RH-EX0627GEZZ | R | Zener Diode | AA |
| **CAPACITORS** | | | | |
| C871 | VCKYPA1HB471K | R | 470p 50V Ceramic | AA |
| C872 | VCKYPA1HB471K | R | 470p 50V Ceramic | AA |
| C873 | VCKYPA1HB471K | R | 470p 50V Ceramic | AA |
| C875 | VCKYPA2HB102K | R | 1000p 500V Ceramic | AA |
| C876 | RC-KZ0150CEZZ | R | 1000p 3kV Ceramic | AB |
| C878 | VCEAGA2EW336M | R | 33 250V Electrolytic | AD |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|
| C880 | VCKYPA1HB471K | R | 470p 50V Ceramic | AA |
| C881 | VCKYPA1HB471K | R | 470p 50V Ceramic | AA |
| C882 | VCKYPA1HB471K | R | 470p 50V Ceramic | AA |
| | **RESISTORS** | | | |
| R879 | VRD-RA2BE471J | R | 470 1/8W Carbon | AA |
| R880 | VRD-RA2BE471J | R | 470 1/8W Carbon | AA |
| R881 | VRD-RA2BE471J | R | 470 1/8W Carbon | AA |
| R882 | VRS-VV3DB153J | R | 15k 2W Metal Oxide | AA |
| R883 | VRD-RM2HD272J | R | 2.7k 1/2W Carbon | AA |
| R884 | VRS-VV3DB153J | R | 15k 2W Metal Oxide | AA |
| R885 | VRD-RM2HD272J | R | 2.7k 1/2W Carbon | AA |
| R886 | VRS-VV3DB153J | R | 15k 2W Metal Oxide | AA |
| R887 | VRD-RM2HD272J | R | 2.7k 1/2W Carbon | AA |
| R888 | VRD-RA2BE471J | R | 470 1/8W Carbon | AA |
| R892 | VRD-RA2BE102J | R | 1k 1/8W Carbon | AA |
| R893 | VRD-RA2BE102J | R | 1k 1/8W Carbon | AA |
| R894 | VRD-RA2BE102J | R | 1k 1/8W Carbon | AA |
| R898 | VRD-RA2BE471J | R | 470 1/8W Carbon | AA |
| R899 | VRD-RA2BE471J | R | 470 1/8W Carbon | AA |
| | **MISCELLANEOUS PARTS** | | | |
| P851 | QPLGN0641CEZZ | R | Plug, 6 Pin | AB |
| P882 | QPLGN0541CEZZ | R | Plug, 5 Pin | AB |
| ⚠ SC881 | QSOCV0840CEZZ | R | Socket, 11 Pin | AK |

## SUPPLIED ACCESORIES

### ACCESSORIES

| | |
|---|---|
| RRMCG0025KJSA | Infrared R-C |
| TiNS-0109KJZZ | Instruction Book |

## PACKING PARTS
## *(NOT REPLACEMENT ITEM)*

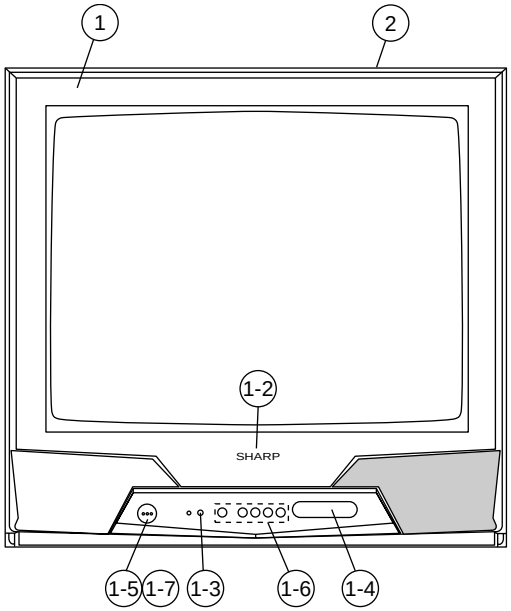
| | | | |
|---|---|---|---|
| SPAKC0105KJZZ | - | Packing Case | — |
| SPAKP0697CEZZ | - | Wrapping Paper | — |
| SPAKX0067KJZZ | - | Packing Add. | — |
| SPAKX0068KJZZ | - | Packing Add. | — |
| SSAKA0230CEZZ | - | Polyethylene Bag | — |

## CABINET PARTS

| | | | | |
|---|---|---|---|---|
| 1 | CCABA0083WEA0 | | Front Cabinet | |
| 1-2 | HBDGB0001KJSA | R | SHARP Badge | AE |
| 1-3 | HDECQ0038KJSA | | LED R/C Cover | |
| 1-4 | HDECQ0039KJSA | | AV Cover | |
| 1-5 | JBTN-0042KJSA | | Power Button | |
| 1-6 | JBTN-0043KJSA | | Control Button | |
| 1-7 | MSPRC0003KJFW | | Power Button Spring | |
| 2 | CCABB0053WEA0 | | Rear Ass'y Cabinet | |

| Ref. No. | Part No. | ★ | Description | Code |
|---|---|---|---|---|

## CABINET PARTS LOCATION



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